

KENDALL, Amos

Morse's patent. Full exposure of Dr. Chas. T. Jackson's pretensions to the invention of the American electro-magnetic telegraph. Washington, 1852.

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MORSE'S PATENT.

FULL EXPOSURE

OF

DR. CHAS. T. JACKSON'S PRETENSIONS

TO THE

INVENTION

OF THE

AMERICAN ELECTRO-MAGNETIC TELEGRAPH,

BY

HON. AMOS KENDALL,

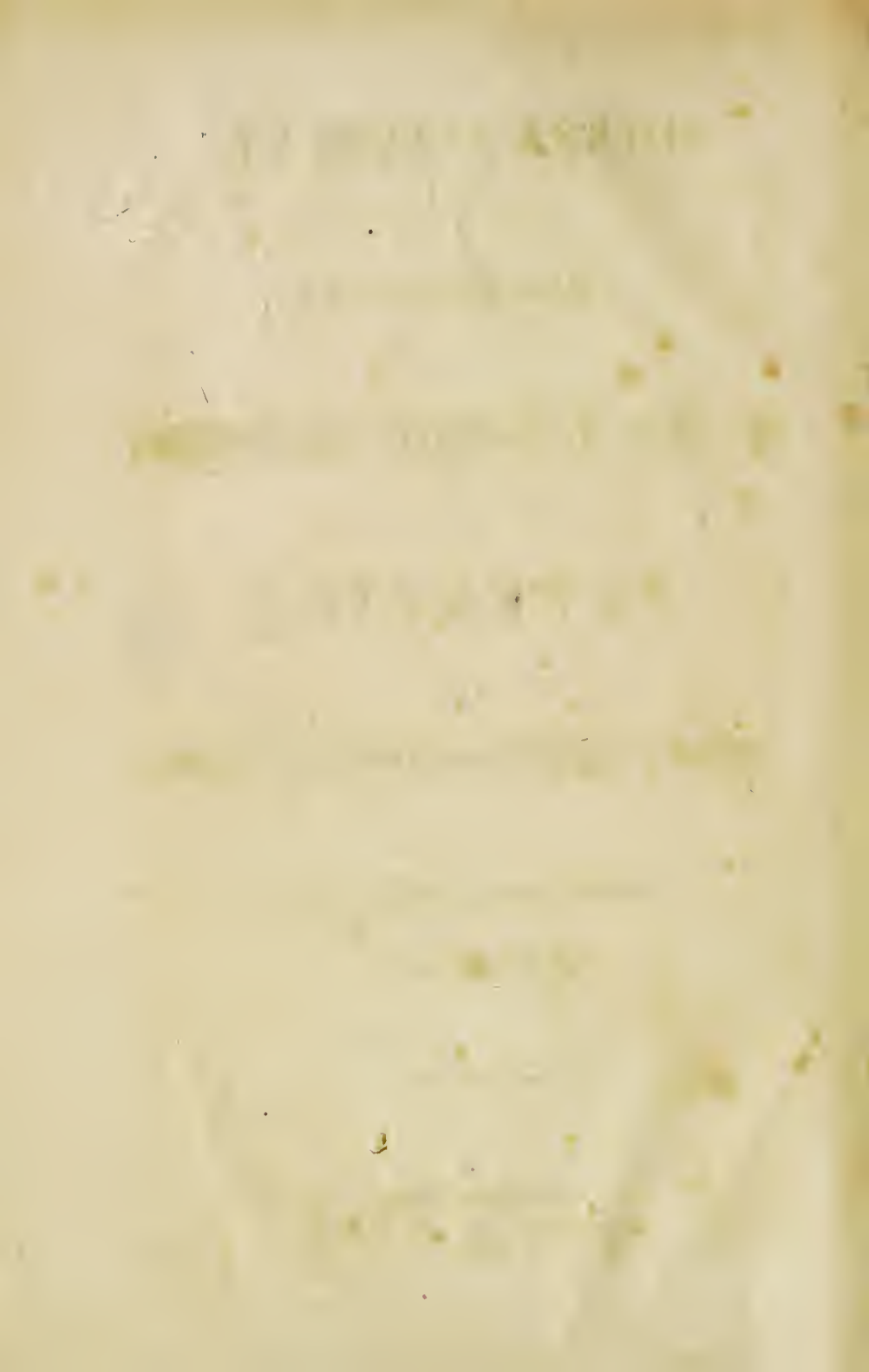
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1852.



MORSE'S PATENT.

FULL EXPOSURE

Of Dr. Charles T. Jackson's pretensions to the invention of the American Electro-Magnetic Telegraph.

To enable the reader to understand the process by which the scientific monomaniac, Dr. Charles T. Jackson, has come to consider himself the inventor of Morse's Electro Magnetic Telegraph, we must turn back and trace the progress of the invention and the publications and correspondence concerning it.

Prof. Morse and Dr. Jackson, were fellow passengers on board the packet ship Sully, in October, 1832, on her voyage from France to the United States; and it was during a conversation with Dr. Jackson on board that ship that the idea of an Electric Telegraph first occurred to the mind of the Professor.

There are two points on which the parties agree, viz :

First, that there was conversation between them on the subject.

Secondly, that in answer to Prof. Morse's inquiries, Dr. Jackson informed him what substances were readily affected by the electric current in such a way as to change their color, and that experiments were to be made on their arrival in the United States, with the view of ascertaining what chemical compound could be thus most advantageously used for marking telegraphic signs.

In a letter to Prof. Silliman, dated December 25th, 1832, (see Boston Case, page 163,) Dr. Jackson said :

"On my voyage home, I had the pleasure of becoming acquainted with S. F. B. Morse, a distinguished American artist, who is very ingenious in mechanical inventions. We employed our weary hours at sea in contriving various things; among which, we invented an Electric Telegraph, light-house, &c. As we intend to make some experiments before we say any thing about these products of our speculations, I forbear troubling you with a description of the machinery until it shall be matured and proved on a small scale, by actual trial."

In a letter to Prof. Morse, dated November 7th, 1847, Dr. Jackson states what the projects were, which were to be tested by experiment, in the following words, viz :

"1. I observed that electricity might be made visible in any part of the circuit by dividing the wire, when a spark would be seen at the intersection.

"2. That it could be made to perforate paper interposed between disconnected wires.

"3. Saline compounds might be decomposed, so as to produce colors on paper.

"*The second and third projects were finally adopted for a future trial, since they could be made to furnish permanent records.*"

Here we have stated by Dr. Jackson, the projects to be experimented upon, as represented to Prof. Silliman; and thus far, or at least in reference to the third project, Dr. Jackson and Prof. Morse agree.

But in reference to the *Electro Magnetic Telegraph*, Morse's *real, practical invention*, they are "wide as the poles asunder." Dr. Jackson asserts that he described it minutely to Prof. Morse on board the Sully, while Prof. Morse asserts that he never received from Dr. Jackson a practical hint on the subject.

Dr. Jackson himself shall be the witness to prove that it was not an *Electro Magnetic Telegraph* that he had in view in his conversation with Prof. Morse on board the Sully.

1. In his letter to Prof. Silliman, dated December 25th, 1832, he says that the telegraph invented by him and Prof. Morse, jointly, was an "*Electric Telegraph.*"

2. In his letter to Prof. Morse, dated November 7th, 1837, the two projects which he says "were finally adopted for a future trial," were projects of an *Electric Telegraph merely*, and had nothing to do with electro magnetism. Nor does he in that letter, pretend that he had with Prof. Morse, on board the Sully, any conversation about an *Electro Magnetic Telegraph*; and yet, two years afterwards, he twice stated that he had in that letter, recapitulated *all the conversation* he had with Prof. Morse on board the Sully, having relation to the telegraph.

In an article prepared by Dr. Jackson, and published in the Boston Morning Post in January, 1839, it is represented that this letter contained "*a detail of all the circumstances of the invention and of the conversation which took place on board the Sully.*"

In a letter to Sidney E. Morse, brother of Prof. Morse, dated January 23d, 1839, Dr. Jackson, speaking in reference to the same letter, said: "*I wrote a letter in which all our conversation which took place on board ship, was recapitulated, so that he (Prof. Morse) is in full possession of the facts on which my claim is founded.*"

Nor can Dr. Jackson now claim that any thing material was omitted in that letter; for he says therein, "you (Morse) say that you have a distinct recollection of the manner, time, and place, and the moment when the thought of making an electric wire the means of communicating intelligence first came into your mind and was uttered. If you have this vivid recollection, you cannot refuse your assent to the following remarks; for I remember too, and am happily endowed with a strong and retentive memory as to the facts."

And in another version of the same letter which Dr. Jackson sets forth in his deposition in the Boston Case, he says, "*I remember distinctly every word of the conversation that took place in the cabin of the Sully, the substance of which is contained in my above proposals.*"

Let us now quote from that letter as received, all the circumstances and conversation therein detailed and recapitulated, being the entire substance of his "above proposals:" "I was (says Dr. Jackson) enthusiastically describing the various and wonderful properties of electricity and electro magnetism before yourself, Mr. Rives, Mr. Fisher, and others, at table after dinner, while the company were all listeners, and as appeared to me, were somewhat incredulous, they knowing little or nothing of the subject. I mentioned, among many other things, that I had seen the electric spark pass instantaneously without any appreciable loss of time, 400 times around the great lecture room of the Sorbonne. This evidently surprised the company, and I then asked if they had not read of Dr. Franklin's experiment, in which he caused electricity to go a journey of 20 miles by means of a wire stretched up the Thames, the water being made a portion of the circuit. The answer was from yourself, that you had not read it. After a short discussion as to the instantaneous nature of the passage, one of the party, either Mr. Rives or Mr. Fisher, said it would be well if we could send news in the same rapid manner: to which you replied, Why can't we? I then proceeded to inform you, in reply to your question, how it might be done.

"1st. I observed that electricity might be made visible in any part of the circuit, by dividing the wire, when a spark would be seen at the intersection.

"2d. That it could be made to perforate paper, if interposed between the disconnected wires.

"3d. Saline compounds might be decomposed, so as to produce colors on paper.

"The 2d and 3d projects were finally adopted for future trial, since they could be made to furnish permanent records. The saline substances mentioned, were certain salts of lead, such as the acetate and carbonate which an interrupted electro galvanic current would decompose and leave a black mark on the paper. Next, tumeric paper was to be dipped in a neutral salt, say sulphate of soda, and then acted upon by the galvanic current. This would produce brown marks from presence of free disengaged alkali. Platina points were proposed to effect the changes of color. I then observed, that it would be easy to devise a method of reading the markings.

"Here the conversation changed for a while, and was resumed by you the next day after breakfast. You then questioned me

again on every point of the invention, and said that you had been thinking much about it, and, pencil in hand, proposed a method of decyphering the markings, the dots and marks being made regularly. This was a subject of discussion, and we both took part in it; but I acknowledge that you did most in planning the numeration of the marks. You at first proposed, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, and subsequently reduced the number to five figures and an 0."

This is the amount of the invention on board the Sully, given in that letter—*every word of it*. This is what Dr. Jackson said to the public through the Boston Post in 1839, contained "*a detail of ALL the circumstances of the invention and of the conversation which took place on board the Sully;*" this is what he afterwards wrote to Sidney E. Morse was a recapitulation of "*ALL our conversation which took place on board ship,*" affording Prof. Morse "*FULL POSSESSION of the facts on which my claim is founded.*" It is, as he said, the "*substance*" of a conversation, "*EVERY WORD of which he remembered.*"

The reader will perceive, that in this detail there is not ONE WORD about an Electro-Magnet Telegraph. The whole has exclusive reference to an Electro-Chemical Telegraph. The *projects reserved for future trial*, the chemical compounds mentioned, the platina points to effect changes of color—none of them have any thing to do with an Electro-Magnetic Telegraph.

One of two conclusions is inevitable, viz: either Dr. Jackson said nothing about an Electro-Magnetic Telegraph on board the Sully in 1832, or he omitted to claim what belonged to him in 1837, and uttered and repeated a gross falsehood adverse to his own claim in 1837 and 1839. Those who know Dr. Jackson will readily acquit him of omitting to claim all that belonged to him in the way of discovery or invention, and will be inclined to think that the letter of 1837 did in fact contain *the substance of ALL the conversation he had with Professor Morse in relation to an Electric Telegraph on board the Sully.*"

Certainly, Dr. Jackson himself is not at liberty to take any other ground, after stating that he remembered "*every word*" of the conversation, and that this letter *contained all of it!* Can he now be permitted to say that his memory is weak and treacherous; that he did not remember the most material part of the conversation, which did not recur to his mind until years afterwards?

So it is, however, that Dr. Jackson, in his recent depositions, has said and sworn, in substance, that the letter of 1837 did not contain all the conversation with Prof. Morse on board the Sully; that the most material part of it, the only part which has any thing to do with the present controversy, was forgotten and omitted; that the part given was, in an essential point, remembered

wrong, and erroneously stated; and some things then remembered, he does not now remember at all! He now remembers, that in the conversation on board the Sully, he described minutely the Electro-Magnetic Telegraph, as it now exists; he remembers that it was not Prof. Morse, but himself, who devised the system of signs; and he does not remember that it was Mr. Fisher or Mr. Rives who first suggested the idea of sending news by electricity. To make more plain the operation of Dr. Jackson's "strong and retentive memory," we place in parallel columns his recollections, as given in 1837 and 1850:

"ALL THE CONVERSATION" between Dr. Jackson and Prof. Morse, relating to the Telegraph, on board the pocket ship Sully, in 1832, as given in the letter of Dr. Jackson to Prof. Morse, dated Nov. 7, 1837: THE CONVERSATION between Dr. Jackson and Prof. Morse, relating to the Telegraph, on board the packet ship Sully, in 1832, as given in Dr. Jackson's deposition in the case of Smith vs. Downing, &c., in 1850:

"Now, in what manner did the discovery and invention arise, and to whom are the suggestions due? I was enthusiastically describing the curious and wonderful properties of electricity and electro magnetism before yourself, Mr. Rives, Mr. Fisher, and others, at table, after dinner, while the company were all listeners, and, as appeared to me, were somewhat incredulous, they knowing little or nothing of the subject. I mentioned, among other things, that I had seen the electric spark pass instantaneous, without any appreciable loss of time, four hundred times around the great lecture room of the Sorbonne. This evidently surprised the company, and I then asked if they had not read of Dr. Franklin's experiment, in which he caused electricity to go a journey of 20 miles, by means of a wire stretched up the Thames, the water being made a part of the circuit? The answer was from yourself, that you had not read it. After a short discussion as to the instantaneous nature of the passage, one of the party, either Mr. Rives or Mr. Fisher, said it would be well if we could send news in the same rapid manner. To which you replied, 'Why can't we?' I then proceeded to inform you, in answer to your question, how it might be done:

"1st. I observed that electricity might be made visible in any part of the circuit, by dividing the wire, when a spark would be seen at the intersection.

"2d. That it could be made to perforate paper if interposed between the disconnected wires.

"While on the voyage, one day at table, I introduced the subject of electricity and electro-magnetism, describing an experiment of Pouillet, of sending electricity a great many times around the Academy of the Sorbonne, without any perceptible loss of time. There being some expressions of incredulity, I endeavored to enforce the fact by alluding to Franklin's experiment of transmitting an electric spark to a great distance, using a wire and water as conductors. Mr. Morse asked in which of Franklin's works it was contained, and stated he had never read it. I stated I believed it was in his autobiography. After some discussion on the point, one of the passengers said, 'It would be well if we could send news in this rapid manner.' This was a casual remark in allusion to our earnest desire to hear from home, as there was some apprehension of a war with France. Mr. Morse said, 'Why can't we?' I immediately replied, 'We can; there is no difficulty about it,' and then proceeded to describe various methods by which I conceived that intelligence might be transmitted by electricity and electro-magnetism.

"First, I proposed to count the sparks in a disjoined wire circuit—counting the sparks in time—that is, counting or noting the sparks and the intervals between the sparks.

"Second, by producing colored marks on prepared paper, the paper being saturated with an easily decomposable neutral salt, and stained with iuderic, or some other easily changed vegetable color.

"3d. Saline compounds might be decomposed, so as to produce colors on paper.

"The 2d and 3d projects were finally adopted for future trial, since they could be made to furnish permanent records. The saline substances mentioned, were certain salts of lead, such as the acetate and carbonate, which an interrupted electro galvanic current would decompose and leave a black mark on the prepared paper. Next, tumeric paper was to be dipped in a neutral salt, say sulphate of soda, and then acted upon by the galvanic current. This would produce brown marks from the presence of free disengaged alkali. Platina points were proposed to effect the changes of color. I then observed, it would be easy to devise a method of reading the markings.

"Third, by saturating the paper with a solution of acetate of lead or carbonate of lead, the paper being moistened while the electric current was passed through it, or over its surface, between points of platinum wire.

"Fourth, I proposed to make use of the electro magnet, which is formed by coiling copper wire insulated by being wound with silk around soft iron, bent in the form of the letter U; the iron being rendered temporarily magnetic, by the passage of a galvanic current through the copper wire; a keeper or armature of soft iron being placed across the poles and attracted firmly against them during the time the galvanic current is passing. I proposed to connect with this keeper the short arm of a lever beam and to fix a point of steel in the long arm of the lever, so that when the keeper was drawn in the electro magnet, the point would perforate holes in paper. The paper was to be passed from one reel to another by clock work machinery, so that in intervals of space these holes might be punctured and telegraphic indications be produced thereby.

"When I mentioned the subject of electro magnetism in the presence of Mr. Morse, during this conversation, he asked me the meaning of the term, saying 'Electro Magnetism! How does that differ from other magnetism?' I explained it to him, making drawings of an electro magnet and a galvanic battery for that purpose.

"During a part of this conversation, Mr. Rives and Mr. Fisher were present, and two Messrs. Palmers, of New York, and Capt. W. Pell. They were present at the beginning of the conversation and heard a considerable portion of it, and they all seemed to consider my project visionary. Mr. Morse at that time made inquiries and suggested difficulties, and seemed to regard the thing as impracticable. My earnestness increased in proportion to their incredulity.

"The next morning Mr. Morse came to the breakfast table and said, that he had not slept during the night, and had been thinking about what I had told him about telegraphing, and he was satisfied it could be done. I said, 'to be sure it can; there is no difficulty about it.' We discussed the subject some time; and during this conversation, I spoke of having an electro magnet on board and two galvanic batteries, which were stowed away between decks. I made drawings—rough sketches, as I do not profess to be a draftsman—of the electro magnet, which I gave to Mr. Morse who copied them into his note-book in an artistic manner, asking of me explanations as he made the drawings.

"Either on this or a subsequent day, I also described to Mr. Morse a method of making signals for light houses, by the sudden ignition of charcoal points after the method discovered by Dr. Hare. I made drawings and showed them to Mr. Morse; but upon this method we had very little conversation afterwards. During the rest of the voyage, Mr. Morse appeared very much occupied with the idea of a Magnetic Telegraph, and followed me about the vessel asking me questions and taking notes in his memorandum book.

"Here the conversation changed for a while, and was resumed by you *the next day after breakfast*. You then questioned me again on every point of the conversation, and said you had been thinking much about it, and, pencil in hand, *proposed a method of deciphering the markings of the dots and marks being made regularly*. This was a subject of discussion, and we both took part in it; but I acknowledge you did most in planning the numeration of the marks. *You at first proposed, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, and subsequently reduced the number to five figures and an 0.*

"*I give you full credit for your ingenious suggestions as to the divisions in the markings, which you certainly did propose.*"

"*Within a few days after* my first conversation above mentioned, I think *the third day after*, I had a conversation with Mr. Morse as to the practicability of devising a system of signs which could be readily interpreted, *I proposed an arrangement of punctured points or dots, to represent the ten numerals*. Mr. Morse *proposed to reduce it to five numerals and a zero*, saying that all numbers could be represented thereby. Mr. Morse took a Dictionary and numbered the words, and then tried a system of dots against it. We assigned to each word, selected for that purpose, a separate number, and the numbers were indicated by dots and spaces. We took our respective places at opposite sides of the table. He would send me dispatches written in numerals, which I would examine by the aid of the marked Dictionary, which I held in my hand, and I found no great difficulty in reading them; and then we would change, he taking the Dictionary and I sending the words. Mr. Morse took the principal part in arranging the system of signs, and deserves the greatest credit for it. Mr. Morse made notes of the system of signs so far as we had completed it, in his note book, either fully or partially. We had absolutely concluded on no complete system before the termination of the voyage.

"I saw Mr. Morse's note book in which he made his plans and observations, from his first entries in it in regard to the telegraph, until the end of the voyage. He would often bring it and show it to me, and show me the notes and plans in it; but I never had it in my possession. *I saw nothing in it which I had not explained and given him rough drafts of, except the system of signs, which was the result of our joint action as before stated*. We gave the name of *Electro Magnetic Telegraph* to the instrument proposed and explained as above, and this was the name by which it was known and called in our conversations."

We have marked in italics the most striking discrepancies between Dr. Jackson's account of what took place on board the Sully, in his letter of 1837, and his deposition of 1850.

1. In his letter he says it was "either Mr. Rives or Mr. Fisher," who said "it would be well if we could send news in the same rapid manner."

In his deposition he says it was "one of the passengers," his memory failing to designate which.

2. In his letter he describes the perforation of paper by the electric spark, as one mode of telegraphing described by him.

In his deposition he omits this altogether.

3. In his letter he says the perforation of paper by the electric spark and the discoloring of prepared paper by the electric current, were the two projects "finally adopted for future trial."

On this point his deposition is entirely silent.

4. In his letter, after setting forth specifically three modes of telegraphing described by him, he says, "*here the conversation changed for a while, and was resumed by you the next day.*"

Precisely at this point in his deposition he interpolates a *fourth* mode of telegraphing, being in many respects precisely the same as that then conceived, and afterwards perfected by Prof. Morse, and alleges that a description of that mode also constituted a part of the conversation.

5. His letter, which he repeatedly stated contained *all* the conversation, and, as he said to Sidney E. Morse, put his brother, Prof. Morse, "*in full possession of the facts on which my [his] claim is founded,*" contained *not a word* descriptive of an Electro-Magnetic Telegraph. On the contrary, all the projects therein described had in view a mere Electric Telegraph; and in his letter to Prof. Silliman, dated Dec. 25, 1832, Dr. Jackson said, "*We invented an Electric Telegraph.*"

In his deposition he says they called it an "*Electro-Magnetic Telegraph.*"

6. In his letter he said, "*You at first proposed 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, and subsequently reduced the number to five figures and an 0.*"

In his deposition he says "*I proposed an arrangement of punctured points or dots to represent the ten numerals. Mr. Morse proposed to reduce it to five numerals and an 0.*"

7. In his letter he said, "*I give you full credit for you ingenious suggestions as to the divisions in the markings, which you certainly did propose.*"

In his deposition he not only claims to have been the first to suggest the use of dots and spaces, but says the system of signs "*was the result of our joint action.*"

Dr. Jackson has sworn to three depositions purporting to state what took place on board the Sully ; two in the Kentucky case of Morse et al vs. O'Reilly et al, and one in the Boston case of Smith vs. Downing et al. On some points, these depositions are inconsistent with each other.

The first Kentucky deposition, like the letter of 1837, contains the project of an Electric Telegraph by perforating paper with the electric spark, which is omitted altogether in the second and third depositions.

The first deposition also corresponds with the letter in representing that the conversation about the signs took place the "*next day*" after the first suggestion of sending news by electricity, whereas the second and third depositions represent it as "*a few days after.*"

How are we to account for the fact, that Dr. Jackson claims now what he did not claim in 1837, and recollects now material parts of the conversation which he did not remember then, or even so late as 1839 ? How is it, that his memory is more bright *seventeen years* after the occurrences of 1832 than it was within *five years* ? How is it, that Dr. Jackson's remembrance becomes more vivid as events recede, so that he not only remembers *much more* now than he did seventeen years ago, but is enabled in 1850 to correct errors of memory committed in 1837, and even so late as 1849 ?

Perhaps we may arrive at some conclusion on this point by a more comprehensive review of the publications, correspondence, and testimony having reference to Morse's invention.

On the 15th April, 1837, an article was published by Sidney E. Morse in the New York Observer, in which he said :

"A gentleman of our acquaintance, several years since, suggested that intelligence might be communicated almost instantaneously, hundreds if not thousands of miles, by means of very fine wires, properly coated to protect them from moisture, and extending between places thus widely separated. It is well known, that the electric fluid occupies no perceptible time in passing many miles on a wire ; and if it is possible, by connecting one end of the wire with an electrical or galvanic battery, to produce any sensible effect whatever at the other, it is obvious *that if there are TWENTY-FOUR WIRES, each representing a letter of the alphabet, they may be connected with the battery in any order ;* and if so connected in the order of the letters of any word or sentence, that word or sentence could be read or written by a person standing at the other end of the wires."

On the 28th August, of the same year, (1837,) Professor Morse wrote to Dr. Jackson, and others of his fellow-passengers on board the Sully, requesting their testimony to the fact that he

had invented and described his Telegraph on board that ship in 1832. In his letter to Dr. Jackson, he said: "*I accomplish the marking by means of an electro-magnetic power.*"

As Sidney E. Morse was the brother of Prof. S. F. B. Morse, and in a position to hold constant intercourse with him, it was natural that Dr. Jackson should conclude that Prof. Morse was the gentleman alluded to in the Observer, and that he had accomplished the object by the use of twenty-four wires and twenty-four magnets. In his reply to Prof. Morse, dated the 17th September, 1837, Dr. Jackson said:

"Mrs. Jackson has forwarded to me your favor of the 28th ult., in which you give me some account of the success of our Electric Telegraph. I have seen several notices of it in the newspapers, but observe my name is not connected with the discovery. I am greatly rejoiced to learn that you have been successful in the trial of its power. This I felt confident would be the result, as there are various ways of marking at any distance required. In the application of the electro-magnet, *I had proposed to mark in actual type, having a packet of twenty-four wires for the conductors to the several magnets, each of which marked a letter, and pressed with great power.*"

The perfect coincidence between this plan and that mentioned in the New York Observer some months before, is very remarkable; but it was not Prof. Morse's plan, though Dr. Jackson had good reason to suppose it was.

In his reply, dated September 18th, 1837, Prof. Morse did not disclose what his plan was, though he said:

"The plan of marking by my peculiar type, and the use which I make of the Electro-Magnet was entirely original with me, and all the machinery has been elaborated without a hint from you of any kind in the remotest degree. I am the sole inventor."

In this letter, though Prof. Morse claimed originality of the thought and first suggestion as to the practicability of sending news by electricity, he admitted that Dr. Jackson suggested in reply to his inquiries, some chemical substances which might be used in the process, and said it was agreed that after reaching home, experiments should be tried by them jointly in view to that result.

In this state of the case, Dr. Jackson's letter of the 7th November, 1837, was written. Though he knew Morse accomplished his markings by means of an electro-magnetic power, he did not, in that letter, pretend that he had, on board the Sully, described any mode by which that power could be applied to telegraphic purposes. As we have seen, all his communications, by his own showing, related to other modes of telegraphing. That letter, however, contains conclusive evidence that *he knew very well*

what plan Morse had devised on board the Sully, and was attempting to perfect after his return. He says:

"You will not, I presume, venture to maintain that you, at that time, knew any thing about electro-magnetism more than you learned from me. If I wanted any other proof, beyond your own confession, I should only have to recall to mind your futile attempts (after your arrival in New York) at making a galvanic battery, and *the plan of types, levers, &c., which were wholly impracticable*, and demonstrated to me that you did not understand the subject."

Now, this was the very plan which Morse had carried into effect—the plan which Jackson was then claiming in the dark, and has since claimed in open day. It was one of the plans that Prof. Morse had devised on board the Sully, partially drawn out in his sketch book and shown to Jackson! That Jackson did not know this "*impracticable*" plan had been found *practicable*, is shown near the conclusion of his letter, where he says: "I have invented a new instrument; so perhaps have you; *for I do not know what your new one is*, since you say I have not seen it nor heard about it beyond your announcement."

In his reply to this letter dated December 7th, 1837, Prof. Morse said:

"You must be aware that while you considered my invention as impracticable, you did not suggest a single hint of any other mode of applying it. You spoke of my invention of numerals, intervals, levers, type, &c., which I had drawn out in my sketch book as ingenious, but impracticable; indeed, in your last letter you assert that my mode of permanently recording is impracticable, and that you corrected my errors. How you corrected my errors you don't say, nor what mode you proposed as a substitute. If you did propose any, you can doubtless tell what it is."

Again:

"This machinery consisted chiefly, as you well know, of a system of signs which were numerals to be read by intervals; types and apparatus to arrange the numbers for transmission; a lever to mark on the register by closing and breaking the circuit; and a register moving by clock work; machinery to receive the marks at the proper times. So much of the invention at least you properly concede to me. You allow explicitly in your letter, that I invented these!" * * * * "The apparatus which I invented on board the Sully was gradually matured, and was constructed for, and adapted to, the use of one wire or a single circuit. Now, this you have often asserted to me to be impracticable," &c. * * "If you have invented a telegraph of 24 wires and a mode of marking in real types, why do you claim to be a mutual inventor of mine, which is adapted to one wire or a single circuit, and

which you, at the same time, pronounce 'impracticable?' Your claim to any share in my impracticable mode is, to say the least, very singular. Unfortunately for the sustainment of your claim, the plan which I devised on board the ship, the plan of numerals, types, levers, &c., which you pronounce wholly impracticable, and the use of one wire or a single circuit, which you pronounce impracticable, *is the very plan I have now in successful operation.*"

Thus was it established by Dr Jackson's own evidence in 1837:

First, that he never described any Electro-Magnetic Telegraph to Prof. Morse, on board the Sully, in 1832.

Secondly, that when Prof. Morse described his plan to mark down telegraphic signs by means of a single circuit and single magnet, Dr. Jackson pronounced it "wholly impracticable."

As might be imagined, Dr. Jackson never answered Professor Morse's letter of December 7th, 1837; and it might be supposed, that he would not again set up a claim to Morse's invention. Not so, however. Upwards of a year he remained silent; and in the meantime doubtless ascertained in detail what Prof. Morse's invention really was. Then, in January, 1839, while Prof. Morse was in Europe, he wrote and caused to be published editorially, in the Boston Post, an article commencing as follows, viz:

"We are informed, that the invention of the Electro-Magnetic Telegraph, which has been claimed by Mr. S. F. B. Morse, of New York, is entirely due to our fellow-citizen, Dr. Charles T. Jackson, who first conceived the idea of such an instrument during his return voyage from Europe, in the packet ship Sully, in October, 1832. Mr. Morse being his fellow-passenger, and having pretended to feel a great interest in the invention, and a desire to participate in the experimental trials of the machinery, Dr. Jackson freely communicated to him and to all the cabin passengers his various plans for effecting the telegraphic communications."

Not content with this, Dr. Jackson wrote a letter to a member of the French Academy of Sciences, in which he said:

"I regret to see in the public papers that Prof. Samuel F. B. Morse has appropriated to himself my Telegraph Electro-Magnetic. I explained to him this instrument long ago, on board the packet ship Sully, when I returned to America, in the month of October, 1832. I am pained at the undeserved patronage which the French philosophers have awarded to Mr. Morse. The invention which he has shown them belongs exclusively to me. Since I have known what were his pretensions on the subject, I addressed him my protest, but I see that he perseveres. I pray you to inform the Academy that Mr. Morse has not invented the new Telegraph, and that I gave him the description in 1832."

Without stopping to comment on the *modesty* of the man who could thus trumpet his own inventions, or the *honesty* of the man who thus set up claims to an invention he had previously denounced as impracticable, or the *honor* of the man who could thus stab the reputation of his absent countryman at home and abroad, we now call attention to the singular progress of Dr. Jackson's claims.

In his letter to Prof. Morse, dated Sept. 10th, 1837, he called the invention "*our* Electric Telegraph," and says "*the invention was our mutual discovery.*"

In his letter to Prof. Morse, dated Nov. 7th, 1833, he said, "*I do claim to be the principal in the whole invention made on board the Sully.*"

In the Post article, of January, 1839, he says, "the invention of the Electro-Magnetic Telegraph, which has been claimed by Mr. Samuel F. B. Morse, *is entirely due* to our fellow-citizen, Dr. Charles T. Jackson;" *i. e.* HIMSELF!

And in his letter to the member of the French Academy about the same time, he says, "the invention he (Morse) has shown them (the French philosophers) *belongs exclusively to me!*"

The invention then exhibited, be it remembered, marked with a pencil, or other coloring matter, and the mode of marking by a metallic point indenting paper *was not invented until long afterwards, and not patented until 1846*; and now, behold! *Dr. Jackson claims that also!* He says in his deposition:

"I proposed to connect with this keeper the short arm of a lever beam, and to *fix a point of steel in the long arm of the lever*, so that when the keeper was drawn to the electro-magnet, *the point would perforate holes in paper.*"

Thus Dr. Jackson, according to his own story, was first a *mutual* inventor, then a *principal* inventor, and finally the *exclusive* inventor! He claims to have invented some half dozen modes of telegraphing, but finally settles down upon one, that one which, when presented to him, he pronounced "*impracticable*;" containing features which were not invented until about 1844, and not patented until 1846! He was mistaken in 1837, in the supposed discovery that Morse's Telegraph was composed of 24 wires; then acknowledged that he knew nothing about it; having in 1839 discovered what its leading principle was, he put in a claim for it; and now, in 1850, having ascertained all the details of Morse's machinery, with all the improvements, he claims to have described *the whole* on board the Sully, in 1832, *even down to the pen point first described in Morse's patent of 1846!*

Soon after the publication in the Boston Post in January, 1839, Mr. Sidney E. Morse, the Professor being in Europe, wrote Dr. Jackson, inquiring whether he assumed the responsibility of the

article; and if so, he said "I will thank you to specify the part or parts of the telegraph which you claim as your invention."

In his reply dated January 23d, 1839, and now in his deposition, Dr. Jackson acknowledges himself virtually the author of the article, and repeats, in general terms, his claim to be the inventor of the marking Electro-Magnetic Telegraph of Prof. Morse. In another version of that letter, dated 22d January, 1839, set forth in his Boston deposition, very different from the letter received, he says: "If, however, he (Prof. Morse) takes out the right of using the means I have prescribed, viz:

"1. The perforation of paper.

"2. The marking on chemically prepared paper by the chemical re-action of galvanic electricity.

"3. By the use of electro magnets, printing by moveable levers and letters or types of numerals—then he infringes on the plan which I proposed."

Here Dr. Jackson first specifically claims "the *plan of types, levers, &c.*," which, on board the Sully, and again in his letter of November 7th, 1837, he pronounced "*wholly impracticable!*"

In May, 1839, Prof. Morse having returned from Europe, replied to the article in the Boston Post, placing the invention on its true ground.

Nothing more was publicly heard from Dr. Jackson for *ten years!* He was then summoned to aid in sustaining the O'Rielly piracy on Morse's invention. But, by the developments in his recent deposition at Boston, it appears that then, in 1839, he made private efforts to sustain his unfounded pretensions. He sets forth a letter which he wrote to the Hon. W. C. Rives, dated June 14th, 1839, in the hope of eliciting from him, by leading questions, something which he could use for that purpose. In that letter he says, among other things:

"The processes proposed by me at that time were as follows, viz:

"1st. To count the sparks in the disjoined wire circuit, and to note the number successively given, per watch, so as to denote the numbers.

"2d To perforate paper by the sparks from the Leyden jars and common electric machine.

"3d. To decompose certain saline or metallic salts upon prepared paper, by means of a galvanic current communicating with platina points, connected with conducting wires of copper and the galvanic battery.

"4th. By the lifting power of the electro magnet, to move a lever beam and print *marks or numbers.*

"All these processes were simple and familiar experiments to me, and were unknown altogether to Mr. Morse until I informed him. I was the first person who proposed to use these data for

the telegraph. Will you please give your opinion of the correctness of the above statements?"

Here he re-instates the electric spark omitted in his letter to S. E. Morse, and not only alludes to the electro magnet, but speaks of the *lever beam motion*—"the electro magnet to move a lever beam"—as one of the "processes" which "*were simple and familiar experiments*" to him.

Now, in his letter of 7th November, 1837, to Prof. Morse, he says: "I have proof enough to show that I had produced a lever beam motion with mine (electro magnet) for that purpose, *as long ago as the spring of 1834*," &c. And this is reiterated with additions, in his recent depositions.

In the spurious copy of the same letter, dated November 5th, 1837, set forth in his Boston deposition, Dr. Jackson states the same incident more in detail, as follows, viz:

"I have furthermore, since my return to Boston, made more remarkable improvements with an electro magnet which I brought home from Paris in the Sully, (1832,) when I had the pleasure of your company. In 1834, I produced with that instrument a *lever beam motion*, which was shown to many of my scientific friends; and by that instrument I proposed to print my letters in actual types."

So, the only "remarkable improvement" worthy of particular notice, made by Dr. Jackson, after his return to Boston, was the production of *this lever beam motion in 1834*, a process which he tells Mr. Rives in 1839 was perfectly familiar to him in 1832! It is worthy of note, however, that in none of Jackson's letters of 1837 or 1839 was there any allusion to marking with a steel point. That seems to have been a more recent *discovery!*

Mr. Rives did not think Dr. Jackson's letter of June 14th, 1839, worthy of an answer, and the unfortunate claimant of other people's inventions seems to have given up in despair. Morse took out his patent in 1840 without opposition, and for *seven years thereafter* this disinterested man of science, who had conceived it so much his duty to put down false claims, and give the world the gratuitous use of his invention, suffered Prof. Morse to impress on the Patent Office, on Congress, and on the world, the belief that he was the true inventor of the first recording telegraph! But in 1847, he made another *private* effort to maintain his unfounded claims. He then appears to have become again "*pained*," not only that the "French Philosophers," but the world in general, accorded to Prof. Morse the invention of the reording Electro-Magnetic Telegraph, but that he was likely to derive some emolument from the invention. Under the false pretext, among others, that Prof. Morse was writing letters to be used against him in the Ether controversy, he wrote to J. Francis

Fisher, of Philadelphia, one of the passengers on board the Sully, asserting his claim to the invention of the Telegraph, and enclosing a list of interrogatories as to what passed on board that ship, to which he requested a general answer. The interrogatories were prefaced with some remarks, of which the following is an extract, viz :

“He [Dr. Jackson] also wishes me to say to you, that a statement of the substance of your recollection, separate from any remarks as to what you do not recollect, would be desirable to him,” &c.

This is surely a shrewd way to examine a witness. *“If you can say yes, do so—if not, say nothing. I can then draw inferences which would otherwise be palpably inadmissible!* This is the plain English of this modest proposition. Mr. Fisher returned an answer, however, not at all to Jackson’s taste, from which we shall hereafter take extracts.

Next we find him in correspondence with Royal E. House, an infringer of Morse’s first patent. House writes to him from “New York, January 14, 1848,” and Jackson answers with almost telegraphic despatch from “Boston, January 16, 1848.” This is surely “a *swift witness*.” He heads his letter “*private*,” and says, near its close, “You will please regard this letter as *strictly confidential*.” * * * “If you can get the evidence you need from others, I should prefer to keep out of the dispute.” *Id est*, if you can overthrow Morse’s Patent without my assistance I should prefer it; if not, I am at your service!

And now, in his depositions of 1849 and 1850, we have him swearing that Morse’s invention, *pen-point and all*, was conceived and minutely described by him on board the packet ship Sully, in October, 1832!

Thus far, we have been content to array Dr. Jackson against himself. Let us now see how far his claims are disproved by his own witnesses.

In his genuine letter to Prof. Morse, dated November 7th, 1837, Dr. Jackson said it was “*either Mr. Rives or Mr. Fisher*” who first suggested the idea of sending news by electricity.

In the Post article, of January, 1839, Dr. Jackson says it was *he, himself*, who “*first conceived the idea of such an instrument during his return voyage from Europe, in the packet ship Sully, in October, 1832*,” and adds, “*The origin of the idea of the new Telegraph, as above stated, can be proved by a number of passengers on board the Sully; and Mr. Rives, the American ambassador to France, Mr. Fisher, of Philadelphia, and Capt. Pell, of the Sully, having listened to the conversation, will recollect that Mr. Morse acknowledged himself wholly unacquainted with electro-magnetism, and that Dr. J. freely informed him of every particular discovery applicable to the case.*”

Although Prof. Morse in his reply to the Post article in May, 1839, said: "I have a letter from each of them (Rives, Fisher, and Pell) asserting, unequivocally, my exclusive claims to the invention, and one of them at least has expressed not only surprise, but indignation at the reference made to him by Dr. Jackson;" although some of these were published in Vail's book as early as 1845; and although Dr. Jackson had written to Mr. Rives without receiving an answer; and having written Mr. Fisher, had received an answer disproving his pretensions; yet, in his letter to House in 1848, he refers to the same witnesses in the following words, viz:

"I would suggest that you should consult the passengers in the Sully, who were present at the time I communicated my plan to Mr. Morse. The names of the passengers can doubtless be learned by consulting the newspapers of November, 1832. Mr. J. F. Fisher, of Philadelphia, Mr. Rives, of Virginia, (Mr. R. was Mr. Morse's friend and patron,) two young gentlemen of New York, by the name of Palmer, and Capt. Wm. Pell, were present during part of the conversation, and may, perhaps, remember something about it."

In his Boston deposition, Dr. Jackson says: "During part of this conversation, Mr. Rives and Mr. Fisher were present, and two Messrs. Palmers of New York, and Capt. Wm. Pell. They were present at the beginning of the conversation and heard a considerable portion of it."

Now, let us see what the testimony of these witnesses whom Dr. Jackson invokes, really is.

On the 28th August, 1837, Prof. Morse addressed a circular letter to the Hon. W. C. Rives, Capt. Wm. W. Pell, J. Francis Fisher, Esq., Charles C. Palmer, Esq., and Dr. Charles T. Jackson. In this circular he said:

"My object in writing you is, to ask whether you remember my conversing on the subject of the Electric Telegraph, as my invention, when a passenger with you on board the sship Sully in the month of October, 1832."

Mr. Fisher answered under date of September 19th, 1837, and said:

"I certainly recollect many conversations with you on the subject of an Electric Telegraph during our voyage from Europe in the Sully in October, 1832." * * * * *

"I am at any time ready to give my certificate, that you proposed and were occupied about the details of an Electric Telegraph at the time referred to. Wishing you all success in this as well as every other occupation, and that the establishment of your fame for this invention may be as extensive as it is deserved, I remain," &c.

Capt. Pell answered on the 27th September, 1837, and among other things, said :

“I am happy to say I have a distinct remembrance of your suggesting, as a thought newly occurred to you, the possibility of a telegraphic communication being effected by electric wires. As the passage progressed, and your idea developed itself, it became frequently a subject of conversation. Difficulty after difficulty was suggested as obstacles to its operation, which your ingenuity still labored to remove, until your invention, passing from its first crude state through different grades of perfectionment, was, in seeming, matured to an available instrument, wanting only patronage to perfect it and call it into reality. And I sincerely trust that circumstances may not deprive you of the reward due to the invention, which, whatever be its source in Europe, is with you at least, I am convinced, original.”

Mr. Rives answered on the 21st September, 1837, and said :

“I retain a distinct recollection of your having explained to me the conception of this ingenious invention during our voyage from France to the United States in the autumn of 1832, and that it was more than once the subject of conversation between us, in which I suggested difficulties, that you met and solved with great promptitude and confidence.”

Mr. Charles C. Palmer had left the country, we believe, and did not answer.

After Prof. Morse received Dr. Jackson's letter of the 7th Nov., 1837, in which he attributed to Mr. Rives or Mr. Fisher the first suggestion of sending news by electricity, he wrote another letter to Mr. Fisher dated November 14th, 1837, in which he propounded the following questions, viz :

“First. Do you recollect having made the observation attributed either to you or to Mr. Rives ?

“Second. Have you any impression, from your recollection of what occurred on board the Sully, that any other person than myself, was the inventor of the Electric Telegraph ?”

On the 17th, Mr. Fisher answered to the first inquiry, “certainly not; and it would have been strange, if not silly, to have done so, since the *first mention* of an Electric or Galvanic Telegraph *by you* implied the possibility.

To the second he answered, “I had no idea that any of our fellow-passengers could claim the credit of it. I am quite sure I received my first idea of it from *you*; that you were most interested in it; that *you alone* seemed inclined to test its practicability after landing,” &c.

Prof. Morse also wrote to Mr. Rives making similar inquiries, and received an answer dated March 1st, 1838, in which that gentleman says:

"I am utterly surprised that any one should have given me credit for suggesting it. I am perfectly sure that such a conception had never entered my mind, and that it was a complete novelty to me when first presented to my contemplation by *your conversations* during the progress of the voyage above mentioned. Wishing you, my dear sir, great success in maturing and carrying into execution an invention which promises to mark a new era in the progress of improvements, I remain," &c.

Thus was it proved that Dr. Jackson's "*very retentive memory*" was mistaken in attributing the first suggestion of the idea to Mr. Rives or Mr. Fisher. It now appears, that in 1839, he was equally in error in claiming it for himself, for in his recent deposition, he only remembers that it was "*one of the passengers,*" but not Prof. Morse!

Let it be noted, that this letter was written by Mr. Rives some months after Dr. Jackson wrote to him claiming that *he* was the inventor, and asking a statement to that effect.

On the 20th January, 1838, Prof. Morse again wrote to Capt. Pell with the view of establishing the originality of his invention against Dr. Jackson's claim. In his reply dated February 1st, 1838, Capt. Pell said:

"It is a matter of great astonishment to me, that a fellow-passenger with us in the Sully from Havre in October, 1832, should attempt to contest with you the claim of having been the inventor of the Electric Telegraph, which occupied so much of your attention during the passage, or that there was one on board of her who had any claim to even a participation of its honors." *

* * * "My impressions rest upon my mind with the freshness and force of conviction, that *you only*, on board of that ship, was the originator of the invention; that *your mind alone* seemed interested in it with any seriousness of purpose, even after its first suggestion by you; and while it was in seeming, the daily and favorite object of your study, which was each day developing it into a higher perfection:

"So, when a few days since, I examined your instrument, I recognized in it the principles and mechanical arrangements which on board I had heard you so frequently explain through all its developments. With the sincere wish that no hand may be so rash as to persist in the attempt to snatch from you the reward which belongs to you, I subscribe myself," &c.

While in Paris in 1839, Prof. Morse received intelligence that Dr. Jackson had set up a claim to his *entire invention*; and having ascertained that one of the Palmers resided at Raham in Ireland, he addressed him a letter dated Paris, February, 22d, 1839, from which the following is an extract, viz:

"Please to designate who you believe to be the *inventor*. *Have you any idea that any other person on board that ship could claim*

to be the inventor, or to be a participator in the invention of the Electro Magnetic Telegraph, as there planned? My object in requesting an answer to this question is, to defend myself against a claim just publicly made by *one of our fellow-passengers*, who, since the announcement of the success of my invention, has boldly attempted to deprive me of the 'entire invention.' ”

Mr. Palmer replied, under date of March 5, 1839, and, among other things, said :

“I perfectly recollect your describing to myself, and others of our fellow-passengers on board the Sully, during her homeward passage from Havre to New York, in 1832, an Electric Telegraph, which you stated you had invented, or which had occurred to you since your being on board.

“It was certainly new *to me*, and, to the best of my knowledge and belief, was so also to the rest of our fellow-passengers; for (if my memory does not betray me) no one at that time claimed a priority of invention in your method of applying the electric fluid to the conveying of despatches. I certainly did understand, at the time, that you intended to perfect this invention, which you considered your own, and to obtain a patent for it.”

Mr. Fisher, in reply to Dr. Jackson's letter of June 6th, 1847, among other things, said :

“Whoever first started the idea, he (Morse) at once embraced it, and by dint of his inquiries, and by the aid he solicited from others, was able to carry it to perfection. Without your assistance, or that of others equally accomplished in science, he, in all probability, would have been unable to proceed, but would have ridden it as a hobby-horse, with as little progress as an infant on his. But the praise must be his of seeking, wherever he could find it, the science and mechanical skill which previously he had not, and using them in prosecuting his favorite scheme.”

Mr. Fisher was required to give his deposition in the Kentucky case of Morse et al vs. O'Reilly et al, and on that occasion stated under oath, that he wrote the letters to Prof. Morse, above quoted, dated September 21, and November 17, 1837; that he “then believed, and still believes the matters therein stated to be true; that neither Dr. Jackson, nor any other passenger, except Prof. Morse, was engaged on board of that ship in planning or devising any machine, or telegraphic instrument, or the mode of communicating intelligence by telegraph:” that “Prof. Morse's mind, and his only, seemed to be engaged in that subject, and that intensely;” that Dr. Jackson did not, to his recollection, “on board of the packet ship Sully, or elsewhere, give any minute, or any description of the appropriate, or of any means, or of any instrument, by which news might be communicated by galvanic electricity, or by electro-magnetic machinery;” that to “the best of

his recollection, Dr. Jackson did not, on board the Sully, describe any mode of telegraphic communication." In fine, nothing could be more directly confirmed than Morse's claim is by this deposition, and nothing more effectually exploded than Jackson's claim.

In a deposition in the same suit, Capt. Pell states on oath, that he "believed, and still believes that the matters stated by him in his letters to Prof. Morse, dated on the 27th September 1837, and 1st February, 1839, to be true;" that he "does not know any other passenger or person, who returned with Prof. Morse, on board the ship Sully, in October, 1832, who discovered or invented, or who communicated the discovery or invention of an Electric Telegraph, claimed to have been discovered by Prof. Morse;" that during the passage, "he did not hear, nor did he understand, that any other person on board the said ship, except said Morse, pretended to claim to have made said discovery," that neither Dr. Jackson, nor any other passenger, except Morse, to his knowledge, "made any claim in regard to the matter, as being the inventor, or as having any part in it, or as taking any such part or prominence in the said discussions as would make him out as a participator in the invention;" that "he always has believed, and still does believe that Prof. Morse was the first person, and the only person on board the packet ship Sully, who suggested the Electric Telegraph, and that he alone among the passengers brought it to its maturity."

And the Hon. W. C. Rives, at present Minister to France, declared, on the eve of his departure, that he was ready, on any proper occasion, to confirm on oath the truth of his letters to Prof. Morse, dated September 21st, 1837, and March, 1st, 1838.

Much of this testimony was known to Dr. Jackson *years ago*, and *all of it* was accessible to him before he gave his late deposition in the Boston case. How are we to account for his letters to Rives in 1839, and to Fisher in 1847? What obliquity of intellect or of moral sense could have induced him to refer, in his letter to Mr. House in 1848, to gentlemen who he knew, repudiated his claims, and sustained Morse? And is it not astounding, that *now*, in 1850, after finding every witness he has referred to testifying against him, and his own memory proved treacherous, not only by their testimony but by self-contradictions, this extraordinary man should persist in his unfounded claim with more tenacity than ever?

But there are other dark features in this picture. Dr. Jackson begins by assuming extraordinary learning on his part, and extraordinary ignorance on the part of Prof. Morse. He would make the world believe that Prof. Morse could not have conceived the idea of a Telegraph, because he was too ignorant; and that *he* must have conceived it, because his mind was a perfect store-house, in which was deposited all the learning of the age!

In his letter of November 7th, 1837, to Prof. Morse, Dr. Jackson says :

"You will acknowledge that you were at that time wholly unacquainted with the history and management of electricity and electro-magnetism, while I was perfectly familiar with the subject, it having been one of my favorite studies from boyhood up to that time, and I had enjoyed every possible advantage in acquiring a full knowledge of the subject during my studies in the scientific schools of Paris and elsewhere." * * "I knew every experiment mentioned from my own frequent practice in making them. It was to me no unwrought problem, but a matter of absolute certainty. I was not making conjectures but reporting the facts of chemical and physical science." * * "You will not, I presume, venture to maintain, that you at that time knew anything about electro-magnetism more than what you learned from me."

In his letter to Mr. House, dated January 15th, 1847, Dr. Jackson says :

"Those who know Mr. Morse are aware of the fact, that he had no knowledge of electro-magnetism previous to his voyage in company with me in the packet ship Sully, (Oct., 1832.)" * * "Ignorance of them would be strong presumptive evidence against the patentee who alleges that he discovered and invented the Electro-Magnetic Telegraph, on board the packet ship Sully, during her voyage from Havre to New York, in October, 1832."

In one of his Kentucky depositions, Dr. Jackson says, that when, on board the Sully, he mentioned electro-magnetism, Prof. Morse exclaimed, "*Electro-magnetism! What is it?*"

In his more recent deposition in the Boston case, he says :

"When I mentioned the subject, electro-magnetism, in the presence of Mr. Morse, during this conversation, he asked me the meaning of the term, saying, 'Electro-magnetism! How does that differ from other magnetism?' I explained it to him, making drawings of electro-magnets and a galvanic battery for that purpose. He did not appear to be acquainted with the subject." * * "Mr. Morse, as an apology for not knowing any thing about electro magnetism, said that he had paid no attention to the subject, being wholly occupied with painting and the fine arts." * * * "After our arrival in New York, he (Morse) brought me in New York, a plate of copper and a plate of zinc, each about two inches square, connected by a strip of copper more than a foot in length, and about half an inch in breadth, and asked me if that would do for an elementary battery. I told him no; that it would make no battery at all; that the plates must be near each other, and not connected, for an elementary

battery, which he proposed to make. His producing a contrivance like that, showed that he was not acquainted with the subject of galvanism, not even knowing how to construct a galvanic battery, which is essential to produce the electric current. I explained to him how it could be made."

In the Post article of 1839, Dr. Jackson said, Mr. Rives, Mr. Fisher, and Capt. Pell, "having listened to the conversation, (on board the Sully,) will recollect that Mr. Morse *acknowledged himself wholly unacquainted with electro magnetism*, and that Dr. Jackson freely informed him of every particular discovery applicable to the case."

Now, we have abundant proof that these arrogant and insulting imputations of ignorance to Prof. Morse and assumptions of extraordinary learning in himself, *are absolutely if not wilfully false.*"

That Prof. Morse was not so profoundly ignorant, the evidence is both positive and negative. Let us first look at the negative testimony, and for that purpose introduce Dr. Jackson's own witnesses, Mr. Fisher and Capt. Pell.

While Mr. Fisher was giving his deposition in the Kentucky case, the article in the Post was shown to him, and was asked—

"Do you recollect that Mr. Morse acknowledged himself wholly unacquainted with electro magnetism, or that Dr. Jackson informed him of every particular discovery applicable to the case?"

He answered, "*I do not, nor do I know such to be the fact.*"

The same deposition contains the following :

Question. "Do you know, or do you now believe that Dr. Jackson did, on board the packet ship Sully, entertain the idea, or did you, from any thing then said or done by him, infer that he then entertained the idea of applying his scientific knowledge to the invention of an Electro Magnetic Telegraph, or that he was associated with any other person or persons, in doing so?"

Answer. "*I did not then, nor do I now believe such to be the fact, nor did I infer any such thing from any thing that was said or done on board the Sully.*"

Capt. Pell in his deposition in the same case, testifies that "he always has believed, and still does believe, that Prof. Morse was the first person and the only person on board the packet ship Sully, who suggested the idea of an Electric Telegraph, and that he alone, among the passengers, brought it to maturity;" that he "had no recollection that Prof. Morse ever did, on board the packet ship Sully, make the inquiry of any one in regard to what electro magnetism was; and being shown the Post article, he said "he does not know, nor can he prove the matters therein stated, in which reference is had to deponent, nor does he recollect the matters therein stated to be in his recollection."

And Mr. Rives in his letter of September 21st, 1837, says, "*I suggested difficulties that you met and solved with great promptitude and confidence*"—a fact incompatible with profound ignorance of the subject.

This is the testimony of the witnesses whom Dr. Jackson invokes to prove Prof. Morse's *confession* of his own ignorance!

We will now show that Prof. Morse could not have been so ignorant of the sciences of electricity, electro magnetism, and galvanic batteries, as Dr. Jackson so dogmatically asserts.

Dr. Jackson states in his recent deposition that he is 44 years old. Of course he was born in 1806. Prof. Morse is 58 years old, and of course, was 14 years of age when Dr. Jackson was born.

In Enfield's Institutes of Natural Philosophy, theoretical and practical, edition of January, 1802, book 1, chap. 5, in proposition XXI, we find the following:

"If the circuit be interrupted, the fluid will become visible, and when it passes it will leave an impression upon any intermediate body.

"Exp. 1. Let the fluid pass through a chain or through any metallic bodies placed at small distances from each other. The fluid in a dark room will be visible between the links of the chains, or between the metallic bodies.

"Exp. 2. If the circuit be interrupted by several folds of paper, a perforation will be made through it, and each of the leaves will be protruded by the stroke from the middle to the outward leaves.

"Exp. 3. Let a card be placed under wires which form the circuit, when the circuit is interrupted for the space of an inch, the card will be discolored. If one of the wires be placed under the card and the other above it, the direction of the fluid may be seen."

Thus it will be seen that the FACTS IN SCIENCE contained in Dr. Jackson's two first propositions in his letter of 1837, were well known, and were laid down in an Elementary Book before he was born! Were they in fact known to Prof. Morse in 1832? President Day in his deposition in the Kentucky case states:

"In the years 1808, 1809, and 1810, I was Professor of Natural Philosophy in Yale College, New Haven, and from 1817 to 1846, was President of that Institution. Samuel F. B. Morse, one of the above complainants, during the years 1807, 1808, 1809, and 1810, was a student in that Institution, and a member of classes under my instruction. I verily believe he attended my written lectures upon Natural Philosophy, which were given to the senior class, and my experimental lectures upon that subject, which were given to the junior class. I lectured upon the science of Natural Philosophy, one branch of which related to electricity; and that subject was lectured upon and also experimented upon before my class.

"All the students were required to attend those lectures. I gave a variety of experiments to the class illustrative of electricity. During his attendance in my class, the text book of the class upon the subject of Natural Philosophy, was Institutes of Natural Philosophy, theoretical and practical, by William Enfield, L. L. D., edition of January, 1802."

He then gives an exact copy of the said proposition XXI, a part of which we have above quoted, and then says :

"That book was studied and used by the class then under my instruction.

"I have examined my note book of the experiments exhibited by me to the classes in those years, made at the time; and after having refreshed my recollection, I can now state I did lecture upon the subject contained in said proposition, XXI, above cited, and made experiments illustrative of said proposition, and I presented to the class the experiments, No. 1 and No. 2, in said proposition, and presented to them the results stated under the said head of experiments, 1 and 2."

We will next proceed to inquire whether *the facts in science* contained in Dr. Jackson's 3d proposition were new, and whether they were known to Prof. Morse previous to his seeing Dr. Jackson.

Professor Benjamin Silliman, of New Haven, in his deposition, is asked the following question :

"Did you know in the years 1808, 1809, and 1810, of any experiments of decomposing substances by the agency of galvanic electricity?"

In answer he says : "Many such experiments were then known.

"The decomposition of water by galvanism was performed in London by Messrs. Nicholson & Carlisle, almost as soon as Volta's pile was discovered in 1800 or 1801. I was in England in 1805 and 1806, and was acquainted with Mr. Nicholson and with Mr. Davy, who in 1807, communicated to the Royal Society in his celebrated Bakerian lecture, an extensive series of decomposition by galvanic electricity, and in the next year, 1808, he made his brilliant discovery of the metallic basis of potash and soda. These experiments were repeated in all countries where science was cultivated, and in my chemical courses for 1807, 1808, and 1809, and onward in Yale College, New Haven. I exhibited to my classes the most important of the experiments as fast as they were made known." He also states in his deposition :

"Samuel F. B. Morse was a student in Yale College and attended on my lectures in the years 1808, 1809, and 1810. At that time it is my recollection and belief, that each student attended two of the courses of lectures delivered by me. Samuel F. B. Morse resided near me for several years, from 1823 inclusive, and

onward. The families were on terms of intimacy, and Mr. Morse was in the habit of frequent communication with me. At this time Dr. Robert Hare's splendid Galvanic Calorimeter had been for some time in my possession, and many interesting and beautiful results were exhibited by them, as for example, in the fusion of charcoal and combustion of metals, &c., Samuel F. B. Morse was, from his intimate personal relations with me, permitted to be often present in my laboratory in my private trials and preparatory experiments, and was thus made familiar with them."

Thus, "the facts in science," about which Dr. Jackson dogmatized on board the Sully, were, to a great extent, *discovered before he was born*, and the three processes named in his letter of Nov. 7th, 1837, as proposed by him for telegraphing, *had been exhibited and explained to Prof. Morse before this dogmatist was four years old!* Moreover, Prof. Morse had enjoyed in Prof. Silliman's laboratory and conversations, opportunities to become acquainted with all the new discoveries and improvements in these sciences while Jackson was yet a boy!

It necessarily follows, that those who attended the lectures of Professors Day and Silliman, and witnessed their experiments in electricity and galvanism, must have had *some* knowledge, from inspection as well as description, of the batteries then in use. Professor Silliman, in his deposition, says: "The batteries then in use, were the pile of Volta, the battery of Cruikshanks, and the *Curonne des tasses*, well known to the cultivators of this branch of science. I always exhibited these batteries to my classes; they were dissected before them, and their members and arrangements of the parts, and the mode of exciting them, were always shown." In his next answer, he says "*Samuel F. B. Morse was an attendant on my lectures.*"

With "several years" familiarity with Prof. Silliman, and with the experiments in his laboratory, "from 1822 inclusive and onwards," Prof. Morse must have become well acquainted with all improvements and changes in electric and galvanic batteries, up to the close of that period.

The evidence that Prof. Morse had kept pace with the discoveries in electricity and electro-magnetism, does not stop here. In the winter and spring of 1826-7, he attended a course of lectures on electro-magnetism, given before the New York Athenæum, by James Freeman Dana, professor in the New York University, in which the discoveries in that science, up to that time, were detailed and illustrated by experiment. Dr. Jackson's rude charge of gross ignorance on the subject, called to Prof. Morse's mind these lectures, with many of the experiments then exhibited, and the apparatus with which they were performed. Among this apparatus was an electro-magnet, made by bending a rod of soft iron in the horse-shoe form, covering it with sealing wax, and

coiling around it a naked copper wire. Diligent inquiry enabled him to find this identical electro-magnet, which had passed into the hands of Prof. Torrey, now of New York University. He also procured the manuscript of the identical lectures, which remained in the hands of the widow of Prof. Dana. These he fully identified, and they were produced in the final trial of the Kentucky case.

The electro-magnet was accompanied by a deposition of Prof. Torrey, in which he sets forth a letter written him by Prof. Morse, dated March 4th, 1847, from which the following is an extract:

"In conversing a day or two since with Mr. Pike and Dr. Chilton, they informed me that much, if not most, of his (Dana's) apparatus was purchased by you. Have you the horse-shoe magnet, covered with red sealing-wax varnish, around which he made a single coil of uninsulated wire, each turn separated from its neighbor about $\frac{1}{4}$ or $\frac{1}{2}$ of an inch, and with which he illustrated, at his lectures before the New York Athenæum, the electro-magnet? If you have, and would like to part with it, I should be pleased to be the purchaser."

Professor Torrey answered from "Observer Office, New York, March 8th, 1847," and said:

"I received your letter on Saturday, and brought down this morning the piece of apparatus which must be the one alluded to in your letter. It is, however, covered with 'black,' instead of 'red sealing-wax varnish.' If it is of any use to you, I beg you will accept of it. I am sure it is the one used by Prof. Dana, in his lectures before the New York Athenæum."

In his deposition he said, "he was well acquainted with Prof. James Freeman Dana, prior to his death in 1827." * * "He became the purchaser of all his apparatus after his death, and among other articles which he purchased, which Prof. Dana had at the time of his death, was an electro-magnet," &c. * * * "He fully believes, and had no doubt that said magnet was owned and used by Prof. Dana, in his lectures in the city of New York, in the spring of 1827. He saw, as he believes, this magnet in Prof. Dana's possession, at the time that he was lecturing on electro-magnetism before the New York Athenæum, in the spring of the year 1827, and has no doubt of its identity. This was the first electro-magnet he ever saw," &c. * * "Prof. Dana had already made important discoveries in electro-magnetism, and was still occupied in his researches on that subject at the time of his death. He freely and with much enthusiasm communicated his results to those scientific and literary friends with whom he was associated or intimate." * * "There were other articles of electro-magnetic apparatus belonging to Prof. Dana, which were covered with red sealing-wax varnish, and this, deponent

supposes, is the reason that Prof. Morse was mistaken respecting the color of the peculiar apparatus alluded to, and so inferred at the time of writing deponent's answer to him."

Prof. James Renwick, of the Columbia College, New York, in his deposition in the Kentucky case, after stating that he had been acquainted with Prof. Morse more than thirty years, said, that "Prof. Morse, before his visit to Europe, about the year 1830, paid much attention to the subject of electricity and magnetism;" that "he believes that Prof. Morse was present at the lectures of Dr. Dana, inasmuch as it was the custom of the lecturers to attend each other's courses, and any absence would be cause of remark; that when the interrogatories were put into his hands by Prof. Morse, he was not positively certain that one of Dr. Dana's four lectures was devoted to the subject of electro-magnetism, but that in the course of conversation, Prof. Morse spoke of a permanent magnet caused to revolve on its own axis, by an electric current, as one of the experiments exhibited by Dr. Dana; that this deponent thereupon recollected the said apparatus, and that he has had one made for the apparatus of Columbia College, which was a copy of the apparatus of Prof. Dana; that this recollection has established in the mind of this deponent the certainty, both that Dr. Dana did lecture on electro-magnetism, and that Prof. Morse was present at that particular lecture; that the apparatus in question is rare, and was the invention of Dr. Dana; and that he believes no other have been made than the original one of Dr. Dana's, and the copy now in the collection of the Columbia College," * * "that he saw Prof. Morse for the first time in London, in 1816, and knows that he was long resident in that city; that the discovery of Sir Humphrey Davy, on which the science of electro-magnetism is founded, took place while Prof. Morse resided there, and made a great noise at the time; that this discovery, together with the additions made to it by Oersted, were so familiarly known prior to 1827, that he cannot believe that Prof. Morse, whose tendency to scientific inquiries was decided, could have been ignorant of them."

Dr. James R. Chilton, in a deposition, fully confirms Professor Morse's recollection in relation to the lectures and Dana's electro-magnet, and expresses his entire disbelief that any one who mingled with scientific characters in 1826-7 could be entirely ignorant of electro-magnetism.

Mrs. Matilda W. Dana, widow of Prof. James Freeman Dana, in her deposition in the same case, said:

"My husband and myself resided in the city of New York in the years 1826 and 1827. My husband died on the 15th day of April, 1827, in the city of New York. In the year 1827, he delivered a course of lectures upon the subject of electro-magnetism

and also upon the subject of electricity, before the New York Atheneum, in the chapel of the Columbia College." * * * *
 "And I further depose and say, that the two papers now produced and made exhibits in this cause * * are the original lectures delivered by my husband, James Freeman Dana, before the New York Atheneum in the year 1827;" * * * * "my husband at the time of their delivery, exhibited to his audience various experiments with an electro magnet illustrative of the subject matter of said lectures, and then had and exhibited to his audience an electro magnet in a horse shoe form; that after his death, that identical magnet was sold to his neighbor, Prof. John Torrey.

"Since the funeral of my husband, I have never seen Prof. Morse until the 19th September, 1849. He then, before seeing those lectures and before I told him what they contained, stated to me several of the experiments which were exhibited by my husband at the time he delivered the same before the Atheneum."

Mrs. Dana also states "that her husband's mind was most intensely interested in the subject of electro magnetism, so much so indeed that I frequently heard him talk of it in his sleep. I know that my husband, in the years 1826, 1827, and up to the time of his death, was on terms of intimacy with Prof. Samuel F. B. Morse, and was in the habit of visiting Prof. Morse's painting room." * * * "I have a distinct recollection of visiting Prof. Morse's room in company of my husband, and of examining some of Prof. Morse's paintings." * * "I frequently heard my husband speak of his having been on a visit to Prof. Morse's room." * * * "My husband was so much interested at that time with electro magnetism, that it was his favorite theme in his conversations with his associates and friends. He was in the habit of dwelling much upon it, and of explaining to his friends the result of his experiments in that science. From the terms of intimacy existing between him and Prof. Morse, I can scarcely believe it possible that he and Prof. Morse should not have had frequent and repeated conversations on the subject of electro magnetism." * * * "He was universally frank and communicative in his social intercourse." * * * "I cannot now state positively that I saw Prof. Morse at those lectures before the Atheneum; but from the intimacy that existed between them and their professional relations to each other, I have no doubt he did attend those lectures. I should have thought it very singular if he had not, and presume that his absence would have been a subject of remark."

Mrs. Dana also states, that on the death of her husband, she received "a very kind note of condolence" from Prof. Morse, and adds: "I am very sure that Prof. Morse in his letter of condolence, expressed the pleasure he had in attending my husband's lectures."

The manuscript lectures which Mrs. Dana produces, contain a concise history of the rise and progress of the science of electro magnetism up to the date of their delivery, with descriptions and drawings of apparatus used to illustrate the subject. Of the electro magnet as then constructed, Prof. Dana says, "a spiral placed round a piece of soft iron bent into the form of a horse shoe, renders it strongly and powerfully magnetic when the electric charge is passing through it."

In these lectures, Prof. Dana referred to Oersted and Ampere by name, and gave some account of their discoveries and experiments.

With these facts before him, who can believe that in October, 1832, Prof. Morse was so profoundly ignorant, that when Dr. Jackson mentioned electro magnetism, he exclaimed "*Electro magnetism! What is that? How does it differ from other magnetism?*" Who can believe that having become familiar with electric and galvanic batteries under the teachings of President Day and Prof. Silliman, and witnessed their operations in laboratories and lecture rooms, from 1810 to 1827, he was totally ignorant of their forms and principles?

Let us now examine Dr. Jackson's lofty pretensions to superior knowledge in these sciences. His own evidence is sufficient to prove them as false as his imputations of ignorance to Prof. Morse. In connection with the facts now proved, it will justify the conclusion that of the two, Prof. Morse was by far the best informed on the subject of electro magnetism.

In his letter of November 7th, 1837, Dr Jackson says :

"In the first place, you will acknowledge that you were at that time wholly unacquainted with the history and management of electricity and electro magnetism, while I was perfectly familiar with the subject, it having been one of my favorite studies from boyhood to that time, and I had enjoyed every possible advantage in acquiring a full knowledge of the subject during my studies in the scientific schools of Paris and elsewhere." * * * * *

"I then asked, if they had not read of Dr. Franklin's experiment, in which he caused electricity to go a journey of twenty miles by means of a wire stretched up the Thames, the water being made a portion of the circuit? The answer was from you that you had not read it."

* * * * *

"Now, as to the invention, I beg leave to remark that I knew every experiment mentioned from my own frequent practice in making them. It was to me no unwrought problem, but a matter of absolute certainty. I was not making conjectures, but reporting the facts of chemical and physical science. Hence, since I had performed all the experiments in detail, and had here

brought them together for a specific purpose, I was, so far as they are concerned, the true inventor," &c.

This pretension to superior learning, having tried all the experiments, explained everything to Morse, &c., &c., runs through all his subsequent correspondence, publications, and depositions.

Now, as to the alleged experiment of Dr. Franklin making electricity "go a journey of twenty miles," &c., Prof. Morse was doubtless ignorant of it, for we imagine it never existed except in Dr. Jackson's prolific imagination. But it made the doctor appear *very learned!*

Dr. Jackson said he was not "making conjectures," not propounding "unwrought problems"—all was "absolute certainty;" he "had performed all the experiments in detail," and was reporting facts.

In his Boston deposition, page 162, the following question was put to Dr. Jackson, viz :

"Please state whether or not, after your return from Europe, you constructed any telegraphic apparatus, and if any, what?"

In his answer he says, "in 1834 I took the electro-magnet which I brought home in the Sully," &c., going on to describe certain appendages which he affixed to it, and stating his object thus :

"*This was a rough and extempore contrivance for the purpose of TESTING THE PRACTICABILITY OF WORKING A LEVER BEAM BY ELECTRO-MAGNETISM, so as to produce, by the pin point attached to the end of it, punctures on paper, or other permanent markings or impressions.*"

Now, here, *confessedly*, was a problem "*unwrought*" in 1832, an experiment not "*performed*," a fact unknown. Two years after the conversation on board the Sully, in which he said, as he alleges, that the thing was perfectly easy, "there is no difficulty about it," he swears that he was trying an experiment to test its "*practicability*." In *the same deposition*, he says he declared, on board the Sully, "*there is no difficulty about it,*" and yet he was employed *two years afterwards* in experiments to test its practicability!

There is another fact, which shows that this very learned man had, after all, taken very little pains to inform himself on the subject of electro-magnetism, and in reality knew very little about it. He has himself furnished evidence, that in 1832 he was totally ignorant of important facts and suggestions in relation to this science which had been made public *ten years before!* In his letter to Prof. Morse, dated November 7th, 1837, he says :

"I have searched the archives of science and find that the first idea of such an instrument was conceived by Soemering, who

proposed an Electro-Magnetic Telegraph. Oersted, of Copenhagen, also invented one. Ampere says it is easy to construct an Electro-Magnetic Telegraph. See Ampere, *Exposé de Nouvelle Decouvertes sur L'electro Magnetisme*. Paris, 1822. Page 71."

And in a postscript to that letter, Dr. Jackson said:

"I did not read this in Ampere until about three years since, although I have owned the book since 1832, and when I saw you last I forgot to mention to you that he had conceived the idea of such a Telegraph. I had read portions of the book before, but not that section."

In the version of the same letter given in his Boston deposition, Dr. Jackson says, page 174:

"Now, as to the first origin of the idea of an *Electro-Magnetic Telegraph*, I can assure you, that on looking over my books which I had with me on my return from Europe, (but some of which I had not then read,) I find that two or three other persons had thought of such an instrument long before we had made our invention, and that Soemering and Oersted had actually put one in operation, but without succeeding to their satisfaction. Ampere also says it is easy to construct an Electro-Magnetic Telegraph; and these observations were made in 1822, and published by Ampere. Now, *I was not acquainted with these facts* until my attention was aroused by the movements of certain English inventors, who certainly have no more claim than we have to the *first idea*, or discovery."

In his Boston deposition, page 163, the following question was put to Dr. Jackson, viz:

"Please state, if you are able, by whom the idea of transmitting intelligence by electro-magnetism, or by electricity, was first conceived, and what information, or means of information, you possessed when on board the Sully."

He answered:

"So far as I know, the idea of transmitting intelligence by electro-magnetism was first suggested by Ampere, of Paris, as appears in a work, entitled '*Exposé des Nouvelles Decouvertes sur L'electricite et le Magnetisme de M. M. Oersted, Arago, Ampere, H. Davy, Biot, Erman, Shiveger, de la Rive and al.*' par M. M. Ampere and Babinet, published in Paris in 1822. I had this work on board the Sully, but *had not read it at that time.*"

On the same occasion, he was asked directly when Soemering's and Oersted's plans of telegraphing first came to his knowledge, and he replied:

"I had Ampere's account of Oersted and Soemering's plan of a Telegraph Electro-Magnetique on board the Sully, in my trunk,

but *did not read it until I reached home and unpacked my books, soon after my arrival.*"

In his letter of 1837, he said he read that portion of the work which related to an Electro-Magnetic Telegraph *only three years before*, or in the year 1834.

What follows? Why, that this *omni-scientific* gentleman, who was perfectly acquainted with all that had been said and done on the subject of electricity and electro-magnetism when he undertook to instruct Prof. Morse in October, 1832, had not read Ampere's important work, then *ten years old*; and did not, until two years afterwards, know that Ampere had suggested the idea of an Electro-Magnetic Telegraph as early as 1822. From Ampere's work Dr. Jackson appears to have obtained his first information as to what had been said or done by Soemering and Oersted from 1809 to 1820, without a knowledge of which no man in 1832 was fitted to give instruction to others on the subject of electro-magnetism. And while he was, by his own showing, wholly ignorant of the experiments and deductions of Oersted and Ampere, Prof. Morse was measurably instructed in relation to them by Prof. Dana as early as 1827.

From these facts it is apparent that Dr. Jackson, in 1832, had read little or nothing upon the subject of electro-magnetism, and had only such a smattering of knowledge as he had picked up in fugitive lectures and conversations. Yet, while admitting that he had neglected *even to read* the prominent authors on the subject, and remained for *twelve years* wholly ignorant of experiments and facts announced by them, feeling so little interest in the science and in his pretended invention on board the Sully, that he did not read Ampere's work until two or three years afterwards, though all that time in his possession, he now has the assurance to say that electricity and electro-magnetism had been "*favorite studies from boyhood*;" that he was perfectly familiar with the origin and progress of discovery in those branches; that he communicated to Prof. Morse the first idea he had on the subject; that his "*familiarity with the subject enabled him to suggest plans and details at once, with premeditation, as soon as his attention was called to it*;" and that when Prof. Morse and his fellow-passengers evinced doubts on the subject, "*my (his) earnestness increased in proportion to their apparent incredulity!*"

Strange, is it not? that not a single passenger can be found who recollects any thing about his "*earnestness*"—*passing* strange, that *to a man*, as far as consulted, they *do* remember that Prof. Morse was the *only* one who seemed to manifest any earnestness on the subject!

Let us now see how many times Dr. Jackson has "*first idea*" of an Electro-Magnetic Telegraph.

He first assigned it, *on board the Sully*, to Mr. Rives or Mr. Fisher.

Next he claimed it for himself.

Finally, he assigns it to one of the passengers; whose name he does not recollect.

The first conception of the idea *at large*, he assigned, in his letter of November 7th, 1837, to *Soemering*.

In the version of that letter embraced in his deposition, he gives it to *Soemering and Oersted*.

And finally, he swears in his deposition, that so far as he knows, it was first suggested by Ampere!

The progress and accuracy of Dr. Jackson's memory are beautifully illustrated by another circumstance of little importance in itself, but of great weight in the inferences which it justifies.

In his early correspondence, Jackson did not pretend to have exhibited or made on board the *Sully* any drawings of an Electro-Magnetic Telegraph. No such pretension is set up in his letters to Prof. Morse, S. E. Morse, or Mr. Rives, or in his letter to the member of the French Academy, his article in the *Boston Post*, or in his reply to Prof. Morse's strictures upon that article, prepared in 1829, but for the first time published in his Boston deposition.

The omission of so imposing a fact on all those occasions is very remarkable.

His memory seems first to have recovered a faint recollection of that subject when he wrote the letter to Mr. Fisher dated June 6th, 1847; for in that letter he says:

"Morse made sketches and minuted facts in his note-book. I also drew the plan or rough sketch of the lifting magnet in my note book, and showed it to Prof. Morse, and we from that time discussed the subject every day, and Morse followed me about the ship with his note-book in hand, noting down all I told him on the subject."

This was Dr. Jackson's first recollection on this point, *about fifteen years after the occurrence!* All he then recollected was, that he drew a sketch of the lifting magnet in his sketch book and *showed* it to Morse. One year later, however, his memory became much clearer and more comprehensive, and in his letter to Mr. House, dated January 15th, 1848, he states the matter in this wise, viz:

"Then I proposed the use of the electro-magnet, (invented by Prof. Henry,) making use of a lever beam and point, which was to make permanent markings on paper, by pricking holes through it every time the electro-magnet moved the lever beam. This latter plan is the one I fixed upon and most fully described to Mr. Morse on board the *Sully*. I made rough sketches on my note

book, and Mr. Morse being an artist, drew them off better in his memorandum book."

The *improvement* in this version of the story is, that it was not the "*lifting magnet*" only which he sketched, but the lever beam and pen point, as now used, and that it was not only *shown* to Prof. Morse, but that he copied it into his memorandum book.

In his first Kentucky deposition, Dr. Jackson said he *thought* he gave the drawing to Prof. Morse.

In his second deposition he stated *positively* that he gave it to Morse.

In his Boston deposition he says that when Prof. Morse exclaimed, "Electro-magnetism! How does that differ from other magnetism?" "I explained it to him, *making drawings of electro-magnets and a galvanic battery for that purpose.*"

He also says, that "next morning" "I spoke of having an electro-magnet on board, and two galvanic batteries, which were stowed away between decks. I made drawings, rough sketches, as I do not profess to be a draftsman, of the electro-magnet, *which I gave to Mr. Morse*, who copied them into his note book in an artistic manner, asking of me explanations as he made the drawings."

In the taking of his Boston deposition he was asked to produce the note-book in which he had made these drawings, when he replied :

"The leaf containing the drawing of an electro-magnet applied to telegraphing, I gave to Mr. Morse on board the Sully; on another leaf of the book there remains a drawing of an electro-magnet lifting weights, which I still have and will exhibit."

So, prior to 1847, this man, "blessed with a very retentive memory," remembered no drawings worth mentioning.

In that year he thinks it pertinent to mention, that he drew the *lifting magnet* in his note-book and *showed* it to Mr. Morse.

In 1848 he remembers that he made rough sketches on his note-book of Morse's entire register, pen point and all, which Mr. Morse copied into his note-book!

In one deposition of 1839, he *thinks* he gave his sketches to Prof. Morse.

In a second deposition he *knows* he did.

In 1849, he remembers two sets of drawings, including batteries as well as electro-magnets. And when asked to produce the note-book from which he said to Mr. Fisher and Mr. House, Prof. Morse copied his drawings, *behold!* there is the drawing of the "*lifting magnet*" he mentioned to Mr. Fisher; but *all the rest are missing!* There is no trace of the lever beam or pen point, or any telegraph machinery. What has become of it? Why, this man of remarkable memory, now for the first time remembers—

almost eighteen years after the occurrence—that *he had torn out the leaf and given it to Prof. Morse!!*

Who can doubt that he told the whole truth to Fisher; that his sketch book never contained a “drawing of an electro-magnet applied to telegraphing;” that “an electro-magnet lifting weights” is all that he ever drew: and that the rest is the creature of a memory which becomes more vivid as events recede, and manufactures facts and circumstances to sustain the claims and gratify the ambition of its all-grasping master—changes whatever he wishes to have changed, and forgets whatever it is his desire to have forgotten.

As to Dr. Jackson’s alleged experiments with the electro-magnet in the spring of 1834, his own evidence presents a very curious aspect.

In his genuine letter to Prof. Morse, dated 7th November, 1837, he merely said in relation to that matter, “*I have proof enough to show that I had produced a lever beam motion with mine (electro-magnet) as long ago as the spring of 1834, and as I wrote you in my last letter, I could mark with real type.*”

In the false version of that letter set forth in his deposition as a true copy, he says:

“You will now understand that I have invented a new Electro-Magnetic Telegraph, the principles of which I have put in action, and the date of the operation is fixed to the spring of 1834, when I made an exhibition of the instrument to scientific gentlemen and to a class of twenty-five ladies and gentlemen attending my lectures in Hanover street. I do not know what sort of a machine you have constructed, not having seen any description. My invention was alluded to in my last letter.”

Recurring to his last letter, we find all he says on the subject is embraced in the following words:

“In the application of the electro-magnet, I had proposed to mark in actual type, having a packet of 24 wires for conductors to the several magnets, each of which moved a letter and pressed with great power.”

This, then, was the invention, and the only invention claimed by Dr. Jackson in 1837. But now he sets forth this false version of his letter to Prof. Morse, and in connection with it, states that his main invention was *marking with a pen point* attached to the end of a lever beam, and not only leaves us to understand that “several scientific gentlemen” and “a class of twenty-five ladies and gentlemen,” witnessed this operation, but names Mr. Francis Alger as one to whom he exhibited and described it.

Now, where is Mr. Francis Alger, that he is not produced to sustain Dr. Jackson? We had his deposition in the Kentucky case, but *he remembered nothing of this marking with a pen point.*

For that reason, we presume, it was not thought proper to produce his testimony in the Boston case.

Where are the "*several scientific gentlemen*" and the "*class of twenty-five gentlemen and ladies*" to whom Dr. Jackson says he showed his telegraph instrument in action? The following question was put to the Doctor on his recent examination in the Boston case, viz :

"Please name some of the persons who made the class of twenty-five to whom you exhibited your new Electro-Magnetic Telegraph in 1834, and explain the method of its action and how the type were impressed?"

He replied :

"*I only showed the electro-magnet with the keeper in action at that time. It was Mr. Geo. B. Emerson's school of ladies who attended my lectures. It would not be proper for me to give their names. I remember exhibiting the machine, with the lever beam, to Mr. Francis Alger, as stated in chief in my deposition.*"

In his letter he said he had exhibited "*the instrument*"—his "*new Electro-Magnetic Telegraph*"—"to a class of twenty-five ladies and gentlemen;" but when asked to name some of them he says "*it would not be proper for me to give their names,*" and admits that it was no telegraph instrument, but only an "*electro-magnet with the keeper in action,*" which he exhibited!

Again he is asked :

"Did you show the telegraph instrument and type to any ladies or gentlemen, and if so, to whom? and whether to Mr. Alger and to what other gentlemen and when?"

He answered :

"I do not remember showing the combination to the class of young ladies, but I recollect showing it with the lever beam and point to Mr. Alger in the spring of 1834, and putting it in action before him. I also think Judge Halliburton, of Nova Scotia, saw it. I do not remember now to whom else I showed it. I exhibited it to many who came in."

Strange that this man, "happily endowed with a strong and retentive memory," who in 1837, "remembered every word of the conversation that took place in the cabin of the Sully" in 1832, cannot remember *one* of "the many who came in" to see his wonderful invention. Stranger still, that not one of the "many" does not come forward voluntarily (as more than one has done in the case of Morse) to sustain his pretensions. And strangest of all, that he should name Mr. Alger as having seen his lever beam and point in action in 1834, when he knows Mr. Alger recollects no such thing!

It will be recollected, that the perforation of paper by the electric spark, was one of the modes of telegraphing which Dr. Jackson says, in his letter of 1837, he described to Prof. Morse on board the Sully. The charitable supposition is, that his mind, in its morbid desire for fame, has confounded that mode of perforation with the mode he afterwards discovered to be used by Prof. Morse; and, as often happens, even to persons not reputed as absolutely insane, he now really believes the conception of marking with a metallic point was his own! It was but a step further in the same direction, first to *imagine*, and then to *believe*, that he had actually affixed such a point to a lever beam, and shown it in action in 1834!!

But it seems not to have occurred to him that his imagination had not travelled far enough to make out a perfect or even plausible case. The marking with a metallic point is but a *part* of Morse's system, which contemplated the use of but one wire. That mode of marking was devised *for* one wire, and if not inseparable from it in practice, is so peculiarly adapted to it as to render it highly improbable that it would ever have been thought of in any other combination. It is in that combination, that Morse conceived it, and in no other has it ever been used.

Now, Dr. Jackson admits, that he did not know Morse proposed to use but one wire until after the correspondence of 1837, and he virtually concedes to him that part of the invention. In his letter to House, he says, "Perhaps he (Morse) can also maintain his claim for one wire and connection with the soil." The following question was put to him in his recent examination, viz:

"When, if ever, did you first learn that Prof. Morse did in fact design using but one wire and one magnet, with proper connections for telegraphic purposes, and was entitled to the credit of that invention?"

He replied:

"I never learned that he was entitled to such credit at all. I think he mentions the use of one wire in his letter to me. I don't know when I learned he was about using one wire, &c., with proper connections, as asked. *It was after our correspondence had ceased.*"

Now, the last letter in that correspondence is dated December 7th, 1837. It follows, from his own showing, that Dr. Jackson knew nothing of Prof. Morse's real mechanical combination until after the 7th December, 1837. The "one wire" is an essential part of Morse's invention; the metallic point for marking was specially adapted to the one wire; they are parts of the same invention—the one wire first, and the pen point next—and it would be singular, indeed, if Dr. Jackson had in 1834 a distinct conception of the second part without having the least idea of the first!

It can scarcely be necessary to pursue this witness further, but those who wish to see a specimen of falsehood and prevarication never equalled by a man claiming the respect of society, are referred to his cross-examination in the Boston case, pages 167 to 194.

He says, in allusion to the correspondence of 1837, "*Profcssor Morse wrote to me that hc had received a patent,*" when he had only written, "My invention, the invention on board the Sully, has, for some time, *bcen entcred at the Patent Office.*" This falsehood is the more remarkable, as it constitutes a *false reason* given by him for not opposing the granting of a patent to Prof. Morse.

In speaking of his letter of the 7th November, 1837, to Prof. Morse, he says, "*The principal object of my letter was to claim distinctly the application of electro-magnetism to telegraph purposes by permanently marking on paper,*" when, in the letter received by Prof. Morse, *there is not a shadow of such a claim!*

One of the most extraordinary portions of Jackson's deposition is the setting forth of a *false version* of his letter of November, 1837, as a true copy, when he must have known it to be false.

His "strong and retentive memory" must have told him it was false.

The true letter had been in evidence long before, in the Kentucky case, by virtue of a stipulation by counsel, doubtless entered into after consultation with Dr. Jackson, to the effect "that the original letters, of which those marked D and E are copies, (E being the letter of 7th November, 1837, were written by Dr. Charles T. Jackson, of Boston, to Prof. Morse, at their respective dates, and were, at or about their respective dates, mailed by said Jackson to said Samuel F. B. Morse, and were received by said Morse within a few days after their respective dates, and that said Jackson and Morse did not have any other direct correspondence with each other, and that *said copies are true copies of said original letters.*"

Notwithstanding all this, Dr. Jackson, without a word of explanation, now sets forth another version of that letter as a true copy, which he knows is not a true copy.

It is false in its date, which is the 5th November, when the true copy is dated the 7th.

It is false, in omitting material matter, which the true copy contains.

It is false, in containing matter which the true copy omits.

The true letter, after setting forth the three modes of telegraphing, adds:

"*The second and third projects were finally adopted for a future trial, since they could be made to furnish permanent records.*"

This is entirely omitted in the version now produced.

Now, this omission is very important. The passage omitted, distinctly shows in what Messrs. Morse and Jackson *would have been* mutual inventors, had the projects been tested and carried out to any useful result. And as neither of them had any connection with electro-magnetism, it affords the strongest kind of negative testimony that Dr. Jackson had nothing to do with the invention of an Electro-Magnetic Telegraph.

We have heretofore shown that Dr. Jackson's reference in the false version to the "class of twenty-five ladies and gentlemen," as witnesses to the operation of his Electro-Magnetic Telegraph instrument in 1834, is wholly omitted in the true letter.

The true letter is about a third longer than the false version, and there are many other discrepancies. They may both be found in the Boston case; the false version at pages 172-'3-'4; the true letter in appendix at 75 A, to 78 A.

What are the conclusions which are to be drawn from the facts and circumstances now developed?

1. That Prof. Morse and Dr. Jackson had much conversation on board the Sully in relation to an Electric Telegraph; that Prof. Morse devised a system of signs adapted to the simplest practicable machinery; and that it was agreed that Dr. Jackson should experiment, with the view of ascertaining how they could be best made by an electro-chemical process.

2. That Dr. Jackson never tried the experiments.

3. That Prof. Morse devised and suggested a mode of marking his signs by the power of electro-magnetism, which Dr. Jackson pronounced impracticable.

4. That Prof. Morse proceeded to perfect that plan and bring it into use without any aid from Dr. Jackson.

5. That having read the project of 24 wires and 24 magnets in the New York Observer, and been informed by Prof. Morse that he accomplished his markings by an electro-magnetic power, Dr. Jackson supposed the 24 wires to be Morse's plan, and set up a claim to it on no better foundation than that he had talked about electro-magnetism on board the Sully.

Or, having conceived such a plan himself, he had cherished and experimented upon it without communicating it to Prof. Morse, intending to claim it as his own exclusive invention, as in fact he does in the false version of his letter of November, 1837.

6. That his alleged experiments with the metallic point in 1834, are mere fiction.

7. That his assumptions of superior learning in himself, and imputations of profound ignorance in Prof. Morse, are in themselves totally false, and can be considered only as evidences of excessive vanity, partial insanity, and a reckless disregard of truth and justice.

8. That Dr. Jackson's persistence in his absurd claims, and his progressive enlargement of them as he became better acquainted with the details of Morse's invention, after finding his own memory so much at fault, after being repelled by every passenger on board the Sully, and unsupported on any material point by a single witness or a single fact, evinces a mental or moral obliquity which deprives him of all claim to confidence or belief.

That Dr. Jackson is insane upon this subject is the charitable conclusion; and it is fortified by two considerations not yet adverted to.

FIRST. He says he told Prof. Morse on board the Sully that it was easy to make an Electro-Magnetic Telegraph; that "*there was no difficulty about it;*" and he repeats this assertion in his letters and depositions. Yet he says, in his Boston deposition, "At the time that these conversations took place, and for some years afterwards, I was aware that the Electro-Magnetic Telegraph could not be rendered commercially valuable for want of a sustaining battery, or one that would keep up a steady and uniform current, no such battery being then known." And when asked, "When the law of diminution and the law of speed were ascertained, what remained in applying electro-magnetic power to telegraphing?" he replied, "Nothing but the idea of using the electro-magnet for the purpose, as described by me to Prof. Morse, and *the use of a constant battery, subsequently invented by Daniell & Grove*, to give a steady current of electricity."

After all, then, notwithstanding his positive assertion that "*there was no difficulty about it,*" there was a most serious difficulty in making a Telegraph of any value, and this *very learned and consistent savan* perfectly well knew it! In other words, when he asserted "there was no difficulty about it," he knew perfectly well that the assertion was false! He admits it himself.

SECONDLY. When Dr. Jackson asserted in his deposition, that "NOTHING" but the application of the electro-magnet and a constant battery were wanting in 1832 to render electro-magnetism available for telegraphing, he knew the assertion (as understood and intended to be understood) to be absolutely false. He *knew* that the combined circuits of Morse's Patents were wanting, and that there could be no available marking Telegraph without them. He had just stated, that the extent of Prof. Henry's experiments was to prove that "electro-magnets could be acted upon at the distance of a quarter of a mile by a galvanic current," and he knew in 1832 that without something beyond those experiments to extend or renew the power, no marking Telegraph, like Prof. Morse's, was practicable; and he knew it just as well in 1850. How, then, could he virtually say and swear, that "nothing" of the sort was wanting?

This man must be insane. If, in sound mind, he had determined to rob Prof. Morse of the honor of his invention, he would have "gone the whole," and claimed the single wire and the combined circuits, both of which are essential parts of Morse's invention. But the single wire or circuit he concedes to Morse, and the combined circuits he never mentions. Without them, all his claims amount to nothing; and if, in sane mind, he had planned this attempted robbery, his claims would have been adapted to his end. That they fall so far short of it, is of itself the strongest evidence of insanity—of a madness without system—of a mind incapable of clear perceptions or sound reasoning—blind to contradictions, and unconscious of absurdities—mistaking fancies for facts, and seizing on the property of others as its own, without the slightest consciousness of robbery or theft. Let us, then, draw a veil over the infirmity now rendered harmless, and leave its victim to the enjoyment of the ideal world which his own fancy creates, peopling it with inferior intelligences, who, in his imagination, receive instructions from his lips, and profit by his wisdom.*

We think it almost useless to consider what would be the legal effect of this testimony upon Morse's patents, if every claim set up by Dr. Jackson were well founded; but it may not be amiss to consider that point.

1. If Dr. Jackson were in his right mind to swear that he had invented every part of Morse's Telegraph just as it is, it would not invalidate Morse's patents; for it has been judicially established that the oath of one witness shall not outweigh the oath of the patentee. Upon the same principle, his unsupported oath could not invalidate any part of Morse's patents.

* There is a very singular coincidence between the circumstances of Dr. Jackson's claims to the Ether, or Chloroform discovery, and to the Electro-Magnetic Telegraph.

He says that Prof. Morse, when he mentioned electro-magnetism, exclaimed, "*Electro Magnetism! What is it? How does it differ from ordinary magnetism?*"

In his controversy about the Ether discovery claimed by him, he attempted to prove, that when he mentioned Sulphuric Ether, Dr. Morton, his adversary claimant, exclaimed, "*Sulphuric Ether! What is it? Is it a gas?*"

This fact is shown in the Report of a Committee of the U. S. House of Representatives, No. 114, 23d February, 1849. The committee, after investigating the case, state in their report, page 13, that "he (Jackson) did not himself prove the result which was new, or by his information convey knowledge in that direction beyond the point it had already reached. He was a safe and reliable guide to its then utmost limit in that direction, the Calpe and Abyla of scientific research, but left the sea beyond to be explored by others."

In relation to the Telegraph, we have shown that he had not, in 1832, explored seas long known, and had not read accounts of explorations by others, which had been ten years published to the world! He says himself, in his last letter to Morse, "I was not making conjectures, but reporting the facts of chemical and physical science." In the matter of the Telegraph, therefore, he was not "even a safe and reliable guide to the utmost limits of science in that direction."

2. If Dr. Jackson had said and done all that he says he said and did on board the Sully, it would have constituted no patentable invention. He says, first and last, that he described *six* modes of telegraphing, viz :

By counting the electric sparks.

By perforating paper with the electric spark.

By marking paper by the electro-chemical process.

By the ignition of charcoal points.

By 24 wires and 24 electro-magnets, marking in real type.

By wires and electro-magnets, perforating paper with a metallic point.

Now, if he invented a telegraph of any of these descriptions, he invented six telegraphs, and nobody could afterwards rightfully patent a telegraph on any of those plans. But speculative ideas, however correct, are not inventions in the sense of the patent law. It is he only who *reduces the idea to practice* in a manner useful to society that is entitled to a patent. He alone is the "*inventor*" in the sense of the patent law. •

3. If Dr. Jackson had, as he pretends, experimented with the lever beam motion and metallic point in 1834, he does not pretend that he either published his experiments, communicated them to Prof. Morse, or carried them out to any result practically useful to society. He, therefore, neither acquired a right to patent himself, nor did any thing to prevent Prof. Morse or any one else who had pursued the same line of experiments to an useful result, from obtaining and maintaining a patent for it.

4. Were it admitted that every word Dr. Jackson says claiming the honor of Morse's invention is true, still he would fall short of the end at which he aims ; for the single wire and combined circuits, which he does not pretend to claim, are essential parts of Morse's invention and of his patents.

Finally, Dr. Jackson admits, substantially, in his Boston deposition, all which is essential, in a legal point of view, that Prof. Morse ever claimed. He says :

"I would add, that I neither have, nor have had, any disposition to deny to Mr. Morse great credit for mechanical ingenuity and facility in applying the successive inventions in the arts, such as the batteries above mentioned, to the purposes of the telegraph. *He did mature and put into operation a telegraph, either by his own ingenuity, or with the aid of others, and improved the system of characters and signs for an alphabet.*"

Now, it is the *maturing* and *putting into operation* which constitutes a patentable invention ; and as to the signs, Jackson's letter of November 7th, 1837, concedes not only the *improvement*, but the *suggestion* of them to Prof. Morse. And it is settled law, that an inventor does not impair his claims by invoking "*the aid of others*" in maturing his plans.

We feel that so detailed an exposition of Dr. Jackson's inaccuracies and inconsistencies was not necessary to set aside his testimony in this case; but we thought it due to the public, whose servant he is, thoroughly to expose the obliquities of his mind. Giving due weight to the facts herein established, who can rely on Dr. Jackson for the truth in any matter of science or exploration? His vanity amounts to insanity; and there is no falsehood touching that vein of his mind, which it will not induce him readily to believe and confidently to announce as an unquestionable truth.

We annex the correspondence of 1837, between Prof. Morse and Dr. Jackson, marked A, B, C, D, E, and F.

Also, the Post article of 1839, prepared by Dr. Jackson, and the correspondence between him and Sidney E. Morse, with Professor Morse's reply, marked G, H, I, and K.

(A.)

From Professor Morse's Letter Book.

Copy of a letter to Dr. Jackson, Capt. William W. Pell, Francis J. Fisher, Esq., Hon. William C. Rives, H. C. Palmer, Esq., the captain of the Sully, and my fellow-passengers:

NEW YORK CITY UNIVERSITY, Aug. 27, 1837.

DEAR SIR: You may have seen some notice in the papers of an Electric Telegraph, of which I am the inventor. There is to be a contest, it seems, for priority of invention of this Electric Telegraph between England and France, Germany and this country. I claim for myself, and consequently for America, priority over all other countries in the invention of a mode of communicating intelligence by electricity. My object in writing you is to ask whether you remember my conversing on the subject of the Electric Telegraph as my invention when a fellow-passenger with you board the ship Sully, Capt. Pell, in the month of October, 1832. If you do, please inform me as soon as possible, and state precisely what you remember concerning it. Your testimony to the fact of my having invented it at the time will be important in establishing the priority of the American invention.

With sincere respect, sir, your obedient servant,

S. F. B. MORSE.

To Dr. Jackson's, I added, "My plan of marking by means of an electro-magnet has proved completely successful."

To Mr. C. C. Palmer, I added, "If those of your family who remember any thing of the matter would testify to the same, it would be doing me an essential service."

To Capt. Pell, I added the question, "Have you ever spoken of my invention to passengers in subsequent passages?"

In lieu of the above letter, Dr. Jackson has produced the following:

(B.)

NEW YORK, August 28, 1837.

Dr. C. T. JACKSON.

Dear Sir: I regret exceedingly that you were not in town when I was in Boston a few weeks since. I called to have a long talk, and tell you the success of my telegraph. I send you an extract from one of the papers respecting it. I accomplished the marking by means of an electro-magnetic power. Let me hear from you and tell me where you have been, and what new word you have discovered. I hear of you through the journals of science, and always good accounts.

In greatest haste, but truly yours, as ever,

SAM'L F. B. MORSE.

It has been argued, that Professor Morse never sent the letter A to Dr. Jackson, but substituted the letter B, because, knowing Jackson to be the real inventor, he knew better than to ask him for such a statement! The truth undoubtedly is, that *both* letters were sent to and received by Dr. Jackson. The facts and circumstances which sustain this conclusion are the following, viz:

1. Letter A is in the nature of a circular prepared for several persons. Having had more conversation with Dr. Jackson than with any of the rest, Professor Morse desired to say to him more than he said to them. Hence, in addition to the circular, he wrote the private note marked B, and sent them together.

2. The argument presupposes that Prof. Morse was capable of planning and executing a deliberate fraud, and forging a copy of a letter to Dr. Jackson to sustain it, and at the same time placing in the Doctor's hands the means of detection. To say nothing of the *folly* of such a proceeding, there is nothing in Prof. Morse's character to give color to the assumption that he is capable of such *wickedness*.

3. Though Dr. Jackson produces the letter B, he does not deny that he received the letter A, but says he thinks a part of his correspondence with Prof. Morse was destroyed by a fire which had occurred in his house.

4. Both Prof. Morse and Dr. Jackson refer to letter A, as sent and received, in their subsequent correspondence.

In his letter of Sept. 18, 1837, (*sec D, post*.) Prof. Morse says to Dr. Jackson:

"My object in writing you the last time was not only to inform you of my success, which I thought would be gratifying to you as a friend, and the means I employed in effecting my object, but I was in hopes of your testimony to the fact that I invented and elaborated it on the voyage from France in 1832. I desired this testimony, that I might successfully claim for our country the priority of invention which is its due, and I cannot but yet hope

that you will furnish me with this evidence to put side by side with that of the other passengers of the Sully, who have furnished me with full testimony to that effect."

As the request is here repeated which was made in letter A, (there being no such request in letter B,) it is conclusive that the former *had been sent*.

Dr. Jackson, in his letter of November 7, 1837, (see *post*, E.) says to Prof. Morse :

"It seems by your request that I should certify as to the time of the discovery and invention, that you have in your mind the instrument contrived on board the Sully," &c.

Here is a distinct admission that the request contained in letter A was received; for if no request prior to Morse's letter of September 18 had been received, he would have said so.

We deem this evidence conclusive that both letters, A and B, were sent and received.

(C.)

Dr. Jackson's reply.

BANGOR, September 10, 1837.

"S. F. B. MORSE, Esq.

"Dear Sir: Mrs. Jackson has forwarded to me your favor of the 28th ultimo, in which you give me some account of the success of our Electric Telegraph. I have seen several notices of it in the newspapers, but observe that my name is not connected with the discovery. I am greatly rejoiced to learn that you have been successful in the trials of its power. This, I felt confident, would be the result, as there are various ways of marking at any distance required. In the application of the electro-magnet, I had proposed to mark in actual type, having a packet of 24 wires for the conductors to the several magnets, each of which moved a letter and pressed with great power. I have several other applications of electro-magnetism that I shall soon bring to bear on the useful arts. Nothing but the urgency of my present avocations could have prevented me from making public exhibitions in the lecture room, of my new applications. I have drawings of several instruments, and hope next winter to make public trials of the experiments, and shall not publish anything until the work is done and perfected.

"I suppose that the reason why my name was not attached to the invention of the Electric Telegraph, is simply that the editor did not know that the invention was our mutual discovery. It is, I supposed, an accidental inadvertency of the editors; I trust you will take care that the proper share of credit shall be given to me, when you make public all your doings. In the mean time it will

give me great pleasure to aid in forwarding this great work as far as my time will allow.

"I should suppose from what I see in the newspapers, that animal magnetism was going to compete with us in carrying on distant communication.

"Very truly, your friend,

"C. T. JACKSON.

(D.)

Professor Morse's Rejoinder.

NEW YORK CITY UNIVERSITY, *September 18, 1837.*

TO DR. CHARLES T. JACKSON:

My dear Sir: Yours of the 10th instant, from Bangor, I have received, and I lose no time in endeavoring to disabuse your mind of an error into which it has fallen, in regard to the Electro-Magnetic Telegraph. You speak of it as "our Electric Telegraph," and as a "mutual discovery." I am persuaded that when you shall recall the circumstances as they occurred on board the ship, and shall also be informed of the nature of the invention of which I claim to be the sole and original inventor, you will no longer be surprised that your name was not connected with mine in the late announcement of the invention. I have a distinct recollection of the manner, the place, and the moment, when the thought of making an electric wire the means of communicating intelligence, first came into my mind, and was uttered. It was at the table in the cabin, just after we had completed the usual repast at mid-day; you were on one side of the table and I upon the other. We were conversing on the recent scientific discoveries in Electro-Magnetism, and the experiments of Ampere with the Electro-Magnet; you were describing the length of wire in the coil of a magnet, and the question was asked by one of the passengers if the electricity was not retarded by the length of wire. You replied, no; that electricity passed instantaneously over any known length of wire, and you then alluded in proof, to the experiment by Dr. Franklin, who had made many miles in circuit near (London in) Philadelphia, to ascertain the velocity of electricity, but could observe no difference of time between the touch at one extremity and the spark at the other. I then remarked, this being so, if the presence of electricity can be made visible in any desired part of the circuit, I see no reason why intelligence might not be transmitted instantaneously by electricity. You gave your assent that it was possible. The conversation was not diverted by this remark of mine, from the details of the experiments you were describing, which was the obtaining of a spark from the magnet, nor was this thought of the telegraph again mentioned, until I intro-

duced the subject the next day. While your own mind was, during the voyage, more occupied with other branches of science, of geology and anatomy, the thought which I had conceived took firm possession of my mind, and as you well know, occupied the wakeful hours of the night; for I used to report occasionally to you and to several of the other passengers my progress, and to ask you questions in regard to the best mode of ascertaining the presence of electricity. I had devised a system of signs, and constructed a species of type which I drew out in my sketch book, by which to regulate the passage of electricity; but I had not settled the best mode of causing the electricity to mark. Several methods suggested themselves to me, such as causing a puncture to be made in a paper by the passage of a spark between two disconnected parts, &c., which I soon discarded as impracticable. I asked you if there was not some mode of decomposition which could be turned to account. You suggested the following experiment, which we agreed should be tried together, if we could meet for that purpose. It was this: to decompose, by the electricity, glauber salts, upon the paper which was first to be colored with tumeric. This, to me, seemed so simple and easy a mode, that I fell in with the idea, and we agreed to try this experiment as soon as possible after our landing. In my occasional visits to Boston, since my return from Europe, I have always endeavored to see you, and never saw you, as you well know, without introducing the subject of the telegraph, and expressing a wish that the experiment we had talked of might be tried. You were always otherwise busily and necessarily engaged, and the experiment was never tried. I really do not see the ground of your claim to be a mutual discoverer, even if we had tried the experiment proposed and it had been successful. This fact would not have constituted you a mutual discoverer, but it might have made you a partner in a certain sense of the invention. The discovery is the original suggestion of conveying intelligence by electricity. The invention is devising the mode of conveying it. The discovery, so far as we alone are concerned, belongs to me, and it must of necessity belong exclusively to one; and, if by an experiment which we proposed to try together, we had mutually fixed upon a successful mode of conveying intelligence, then might we with some propriety be termed mutual or joint inventors. But as we have neither tried any experiment together, nor has the one proposed to be tried by you been adopted by me, I cannot see how we can be called mutual inventors. You are not aware, perhaps, that the mode I have carried into effect, after many and various experiments with the assistance of my colleague, Prot. Gale, was never mentioned, either by you or to you. The plan of marking by my peculiar type, and the use which I make of the electro magnet, was entirely original with me; all the machinery has been elaborated

without a hint from you of any kind, in the remotest degree. I am the sole inventor; indeed had you been aware of these facts, I am sure you would not have preferred a claim to be a co-inventor in an instrument wholly mine. You say "I trust that you will take care that the proper share of credit shall be given me when you make public your doings." This I have always done, and with pleasure I have always given you credit for great genius and acquirements, and have always said, in giving any account of my telegraph, that it was on board the ship, during a scientific conversation with you, that I first conceived the thought of an Electric Telegraph. Is there really any more you will claim, or that I could in truth or justice give? I have acknowledgments of similar kinds to make to Professor Silliman and Professor Gale, to the former of whom I am under the same obligations, in kind and degree, as to yourself, and to the latter, I am most of all indebted for substantial and effective aid in many of my experiments. If any one has a claim to be mutual inventors, on the score of aid by hints, it is Professor Gale, but he prefers no claim of the kind. I certainly have no cause of complaint because you were never at leisure when I was in Boston, to try the experiment which we agreed together to try; but you will see in a moment that I should have just reason to complain, if after repeated disappointments in this respect, and after having availed myself of a different method, and one entirely my own, to carry into effect my original invention, you should prefer a claim to partnership in it, because we had once conferred together on an experiment never tried.

But I need not reason with you, my dear sir; I am sure it is only necessary to present you this statement of the facts in the case, to induce you at once to perceive the injustice you would do me by persisting to prefer any claim to a partnership in my invention. My object in writing you the last time, was not only to inform you of my success, which I thought would be gratifying to you as a friend, and the means I employed in effecting my object; but I was in hopes of your testimony to the fact that I invented it and elaborated it on the voyage from France, in 1832. I desired this testimony that I might successfully claim for our country the priority of invention which is its due; and I cannot but yet hope, that you will furnish me with this evidence, to put side by side with that of the other passengers of the Sully, who have furnished me with full testimony to that effect. Let me know your intention, for your letter has embarrassed me much, and I will trust to your honor and sense of justice to relieve me from suspense with as little delay as possible.

Believe me, dear sir, as ever,

truly your friend and servant,

(Signed)

SAM'L. F. B. MORSE.

(E.)

*Dr. Jackson's Answer.**"BOSTON, November 7, 1837.**"SAM'L. F. B. MORSE :*

"My dear Sir: On my return from the forests of Maine last Friday I found your letter of 18th September last, which contains a claim to the Electro-Magnetic Telegraph as your own exclusive invention. This claim of yours is to me a matter of surprise and regret, for I have always entertained the highest opinion of your honor and fairness, and should be very sorry to have any reason to change my opinion of your character. It becomes me, however, to claim and to sustain that portion of the honor of the discovery and invention which is my due, and I cannot think that you would wilfully endeavor to deprive me of any thing that properly belongs to me, but that you have led yourself into the erroneous belief that you had a right to more than I think you can justly claim in this invention. This I suppose may have arisen from your having thought of and talked so much on this subject. I trust to your candor and sense of justice to make suitable amends, and, if I am not mistaken in your character, you will certainly do so when you have taken a retrospective glance again to the history of the invention. It seems, by your request, that I should certify as to the time of the discovery and invention, that you have in your mind the instrument contrived on board the Sully during our passage in company, in your return voyage from France in October, 1832. But you subsequently insinuate that there is another and wholly different instrument in contemplation now, which you pretend that I know nothing about.

"This is a strange inconsistency which I cannot reconcile. I will, however, confine my remarks to the invention made on board the Sully. You say that you 'have a distinct recollection of the manner, time, and place, and the moment when the thought of making an electric wire the means of communicating intelligence first came into your mind and was uttered.' If you have this vivid recollection you cannot refuse your assent to the following remarks, for I remember, too, and am happily endowed with a strong and retentive memory as to the facts. In the first place, you will acknowledge that you were at that time wholly unacquainted with the history and management of electricity and electro-magnetism, while I was perfectly familiar with the subject, it having been one of my favorite studies from boyhood to the present hour, and I had enjoyed every possible advantage in acquiring a full knowledge of the subject during my studies in the scientific schools of Paris and elsewhere. Now, in what manner did the discovery and invention arise, and to whom are the suggestions due? I was enthusiastically describing the curious and wonderful properties of electricity and electro-magnetism

before yourself, Mr. Rives, Mr. Fisher, and others, at table after dinner, while the company were all listeners, and, as appeared to me, were somewhat incredulous, they knowing little or nothing of the subject. I mentioned, among many other things, that I had seen the electric spark pass instantaneously without any appreciable loss of time, four hundred times around the great lecture room of the Sorbonne. This evidently surprised the company, and I then asked if they had not read of Dr. Franklin's experiment, in which he caused electricity to go a journey of twenty miles by means of a wire stretched up the Thames, the water being made a portion of the circuit? The answer was from yourself, that you had not read it. After a short discussion as to the instantaneous nature of the passage, one of the party, either Mr. Rives or Mr. Fisher, said it would be well if we could send news in the same rapid manner. To which you replied, 'Why, can't we?' I then proceeded to inform you, in answer to your questions, how it might be done:

"1st. I observed that electricity might be made visible in any part of the circuit by dividing the wire, when a spark would be seen at the intersection.

"2d. That it could be made to perforate paper if interposed between the disconnected wires.

"3d. Saline compounds might be decomposed so as to produce colors on paper.

"The 2d and 3d projects were finally adopted for a future trial, since they could be made to furnish permanent records. The saline substances mentioned were certain salts of lead, such as the acetate and carbonate, which an interrupted electro-galvanic current would decompose, and leave a black mark on the prepared paper.

"Next, tumeric paper was to be dipped in a neutral salt, say sulphate of soda, and then acted upon by a galvanic current. This would produce brown marks, from the presence of free disengaged alkali. Platina points were proposed to effect the changes of color. I then observed, that it would be easy to devise a method of reading the markings. Here the conversation changed for a while, and was resumed by you the next day, after breakfast. You then questioned me again on every point of the conversation, and said that you had been thinking much about it; and, pencil in hand, proposed a method of decyphering the marking, the dots and marks being made regularly. This was a subject of discussion, and we both took part in it, but I acknowledge that you did most in planning the numeration of the marks. You at first proposed, 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, and subsequently reduced the number to five figures and a 0. Now, as to the invention, I beg leave to remark, that I knew every experiment mentioned, from my own frequent practice in making them. It was to me no unwrought problem, but a matter of absolute certainty. I

was not making conjectures, but reporting the facts of chemical and physical science. Hence, since I had performed all the experiments in detail, and had here brought together for a specific purpose, I was, so far as they are concerned, the true inventor, and I do claim to be the principal in the whole invention made on board the Sully. It arose wholly from my materials, and was put together at your request, by me. This you certainly will not pretend to dispute. I give you full credit for your ingenious suggestions as to the divisions in the markings, which you certainly did propose. You will not, I presume, venture to maintain that you at that time knew any thing about electro-magnetism, more than what you learned from me. If I wanted any other proof, beyond your own confession, I should only have to recall to mind your futile attempt (after your arrival in New York) at making a galvanic battery, and the plan of types, levers, &c., which were wholly impracticable, and demonstrated to me that you did not understand the subject. I pointed out to you your errors, and promised, as soon as I should have time, to take up the subject with you, and perform this part of the invention. I have ever, when I met you, been free in my communications, and only wanted leisure to devote a few weeks to our invention. You know why I have not been able to have any spare time: The trouble brought on me by an unfaithful agent while I was absent from home plunged me in pecuniary difficulties at my outset in practice, and kept me for a year or more embroiled in lawsuits occasioned by his frauds. Then the struggle in the outset in medical practice; since then, the charge of a high and responsible duty to the governments of two States as their geological surveyor. These are sufficient reasons. I never lost sight of the Telegraph, and have done more towards it than you are perhaps aware. I do not know how or where you used the electro-magnet for marking, but I have proof enough to show that I had produced a lever-beam motion with mine for that purpose as long ago as the spring of 1834, and, as I wrote in my last letter, I could mark in real type. I am certainly desirous of doing you justice to the fullest extent, and have always spoken of your merits as I hope I shall always have occasion to do. I am also anxious that our country should bear a due proportion of honor in every useful invention, when she deserves the credit by the labor of her men of genius. But I will not do wrong to any one, either for man, friends, country, or myself. Honor to whom honor is due shall be my motto, and I must, I believe, fail in this duty, if I should say that the first idea of an Electro-Magnetic Telegraph was conceived by an American citizen. I have searched the archives of science, and find that the first idea of such an instrument was conceived by Soemering, who proposed an Electro-Magnetic Telegraph. Oersted, of Copenhagen, also invented one. Ampere says, it is easy to construct an Electro-Magnetic Telegraph.

(See Ampere, Expose des Nouvelles Decouvertes sur L'electricite et le Magnetisme. Paris, 1822. Page 71.) The discovery* is not, then, to be claimed by us. I have invented a new instrument; so perhaps you have, for I do not yet know what your new one is, since you say I have not seen it, nor heard about it beyond your announcement. If yours is new I congratulate you upon the invention, but I can give no certificate beyond what you will find in this letter.

"Most respectfully, your friend,

"C. T. JACKSON.

"P. S. I did not read this in Ampere until three years since, although I have owned the book since 1832, and when I saw you last I forgot to mention to you that he had conceived the idea of such a telegraph. I had read portions of the book before, but not that section."

(Post marked November 8, directed, "Prof. Sam'l F. B. Morse, New York city.")

(F.)

Professor Morse's Second Rejoinder.

NEW YORK CITY UNIVERSITY, December 7, 1837.

TO DR. CHARLES T. JACKSON:

DEAR SIR: When yours of the 7th November arrived in New York, I was absent in New Jersey, and confined by (sudden severe) illness to my bed for several days. I take the earliest opportunity to reply to it, which my various engagements would allow.

It is with the deepest regret after the attempt I made in my last to disabuse your mind of its errors on the subject of the telegraph, that I perceive the danger of a collision with you to be more imminent than at first. Unless I can succeed in convincing you how entirely without foundation is the claim to be a "mutual inventor," which in your first letter you set up; and still more, unless you retract from your recent further encroachment, in claiming to be "principal in the invention" on board the Sully, collision is inevitable, and it will then be impossible, in the present state of my invention, to settle the matter without such an appeal to the laws as must be made public, and which, in whatever way decided, will be attended with consequences of a very unpleasant character to both of us. These results I would avoid if possible, and in hope of adjusting matters, privately and amicably, I venture once more to argue the case with you, and will endeavor to convince you that you are under a most serious delusion on this subject; the origin of which delusion I think I can show you.

* "In your sense of the word, refer to your letter."

Your memory and mine are at variance in regard to the first suggestion of conveying intelligence by electricity. I claim to be the one who made it, and in the way which I stated in my letter to you. You acknowledge that the suggestion was made by one of the company and not by yourself, and so doubtful are you by whom it was made, that, although your memory serves you up to the point of giving it to one of two others, rather than to me, yet your memory there fails, and you do not know which of the two it was. Now, sir, it was neither Mr. Fisher nor Mr. Rives who suggested that thought. I suggested it, and in consequence proceeded to found upon it my whole invention. Had not the thought been original with me, I could not have dwelt upon it with any satisfaction. The idea that I had made a brilliant discovery, that it was original, in my mind was the exciting cause, and the perpetual stimulus to urge me forward in maturing it to a result. Had I supposed at that time that the thought had ever occurred to any other person, I could never have pursued it; and it was not till I had completed my present invention, that I was aware that the thought of conveying intelligence by electricity had occurred to scientific men some years before. This thought was suggested to my mind by a well known fact, recalled to my memory in your account of a magnetic experiment; a fact of which you say I confessed ignorance, to wit: The experiment of Franklin on the velocity of electricity. If, indeed, you asked the company if they had not read of Franklin's experiment with 20 miles of wire, &c., and that the reply was from myself, that I had not read it, your memory is doubtless correct; for I had not read it, and have not read it, nor can I find, after much inquiry, any one except yourself who ever heard of it; but if you alluded, as I think you did, to Franklin's experiment of about 4 miles, at Shooter's Hill, this fact was familiar to me, probably before your birth.

After having given my suggestion to another, you make me answer it by asking you "why can't we;" and to this question you represent yourself as having immediately given a methodical answer, which implies that the whole idea of an Electric Telegraph was then, not only perfectly familiar with you, but that the modes of carrying it into execution were also as familiar as any common chemical experiment. Now, if your memory is good, you must be conscious that this is altogether incorrect; that it is impossible that it should be correct, since the very thought was new to all, and required at least a little time to devise modes of carrying it into effect. You must be sensible that my suggestion of the possibility of conveying intelligence by electricity, was episodic; it did not change the current of your remarks from electro-magnetism, upon which you were discoursing, nor did you make a remark concerning a telegraph, until I called your attention to it the next day; as the thought was suggested by me, so it

dwelt in my mind; I cherished it as an antidote to ennui, maturing my invention principally in the sleepless hours of the night. With this invention I was so absorbed, that I thought of little else, and I was in the habit of reporting progress almost daily to the Captain and to several of the other passengers beside yourself. To you, as a man in whom I thought I could confide, I more especially explained my plan of numbers, intervals, types, &c., and the machinery for using them.

I had already invented these, and was reviewing in my mind the various modes of marking at least ten days after my first thinking of the subject, when I consulted you to ascertain if there were not some substance easily decomposed by the simple contact of a wire in an electric state. It was then, and not till then, that you suggested tumeric paper dipped in a solution of sulphate of soda. It was then, and not till then, that you took any interest in the invention. I proposed to you to try this experiment with me when we should arrive at home, and here, sir, is the origin of your error, in thinking yourself entitled on this account to be a co-inventor. This experiment we were to try together, and if you had tried it, and had otherwise aided me in the invention, I should have been willing to share both honors and profits with you. But you very well know you never tried this nor any other experiment in relation to the telegraph, which you ever reported to me. You very well know that you never entertained, until lately, since my invention has been publicly announced, and since the subject of telegraphs has excited the attention of foreign nations, any interest in it, while I always pressed the subject of the experiment to be tried when I met you in Boston. You were full of other engagements, and by your manner of always dismissing it as soon as you could, whenever I introduced it, you showed to me that you esteemed the matter as of little importance.

Thus it has been for nearly five years. You must be aware, too, that while you considered my invention as impracticable, you did not suggest a single hint of any other mode of applying it. You spoke of my invention of numerals, intervals, levers, type, &c., which I had drawn out in my sketch book as ingenious, but impracticable; indeed, in your last letter you assert that my mode of permanently recording is impracticable, and that you corrected my errors. How you corrected my errors you don't say, nor what mode you proposed as a substitute. If you did propose any, you can doubtless tell what it is. In the letter which I first wrote to you, informing you of the public announcement of my telegraph, and requesting the favor of your certificate that I invented it on board the Sully, in 1832, that I might be prepared against any foreign claimants—a favor which I expected would have been granted, I told you as a friend that I had invented a mode of marking by means of an electro-magnet. You would have me to understand by your answer that for some three years past you had secretly

devised the same plan. I allude to this fact to show you that you did not then conceive yourself to be a mutual inventor, otherwise you would not have allowed three years to elapse without disclosing so important a discovery to your partner in the invention. This is a point that needs explanation; if you considered me a partner in the invention, you were bound, in honor, at least, to inform me of it. But if you were contriving secretly to supplant mine, your course is consistent. I shall be loth to adopt the latter supposition, but if I refuse to adopt it, I cannot think you believed yourself to be a mutual inventor.

Another cause of your delusion in this matter, is your entire misconception of the nature of the invention on board the Sully. You seem not to have asked yourself, whether any or how much knowledge of chemical science was requisite to an Electric Telegraph. You describe a variety of experiments in chemical decomposition, and claiming to be perfectly familiar yourself with chemical analysis and charging me, not very courteously, with being entirely ignorant, you have persuaded yourself that the argument is irrefutable in favor of your being the principal inventor. You say that you had collected the materials for that purpose, I being only ignorant, except as you enlightened me. The invention, you affirm arose wholly from your materials, and this I would not attempt to dispute. Now, sir, I not only deny that all the materials were furnished by you, but I deny that I am indebted to you for any single hint of any kind whatever which I have used in my invention. I go further, sir; I assert that all the consultation I have hitherto had with you on the subject, has had only the effect to retard my invention, by holding out expectations that you would try an experiment which you never tried, but which was necessary to be determined one way or the other, before I could advance, conveniently, a single step. I do not charge you with intentional neglect. I readily allow your excuses for not trying the experiments, but these excuses do not alter the fact that your neglect retarded my invention, and compelled me, after five years delay, to consider the result of that experiment as a failure, and consequently to devise another mode of applying my apparatus, a mode entirely original with me. This I have done, and now you lay your claim to be a partner in the invention. The only service which could have given you any claim to a share in the invention you neglected to perform, and then you make your demands as if you had performed it, and performed it successfully.

My invention on board the Sully is mechanical and mathematical; it had no more to do with chemical science than with geology or anatomy. The single scientific fact ascertained by Franklin, that electricity can be made to travel on a conductor any distance, instantaneously, is all that I needed to know, aside from mathematics and mechanical science, in order to plan all I invented on board the ship, as any one will be able to see from a mo-

ment's inspection of my machinery, as there planned. This machinery consisted chiefly, as you well know, of a system of signs which were numerals, to be read by intervals; types, and apparatus to arrange the numbers for transmission, a lever to mark on the register by closing and breaking the circuit, and a register moving by clock machinery to receive the marks at the proper times. So much for the invention at least you very properly concede to me—you allow explicitly in your letter that I invented these, and now what has chemistry or electro-magnestim to do with any of them? But these, you say, were "wholly impracticable;" and, as you "pointed out my errors," you, perhaps, brought your superior knowledge of chemistry and electro-magnetism into the new mode which you suggested, and which was practicable of course; you can point out then, doubtless, this practicable improvement, or rather substitute for mine. The apparatus which I invented on board the Sully was gradually matured, and was constructed for and adapted to the use of one wire, or a single circuit. Now, this you have often asserted to me to be impracticable; and, although you never devised, to my knowledge, any other method, until I informed you of mine with an electro-magnet, you now talk in your letters of using 24 wires and 24 magnets, and of marking in real type. Now, what have these to do with my invention on board the Sully? The use of 24 wires was probably adopted by you from a hint of mine in the very outset, for it was my first and most natural thought; but having devised what I considered a much more simple and less expensive mode, to wit—using one wire—I almost immediately relinquished the first for my new mode; whether you derived the hint or not from me, is to me of little consequence, for, provided you use nothing that was invented by me upon the packet of 24 wires, you are at liberty to use them as you please. If you have invented a telegraph of 24 wires, and a "mode of marking in real type," why do you claim to be a mutual inventor of mine, which is adapted to one wire or a single circuit, and which you at the same time pronounce "impracticable?" Your claim to any share in my impracticable mode is, to say the least, very singular. Unfortunately for the sustainment of your claim, the plan which I devised on board the ship, the plan of numerals, type, levers, &c., which you pronounce wholly impracticable, and the use of one wire or a single circuit, which you pronounce impracticable, is the very plan I have now in successful operation. This assertion you will perhaps again say is inconsistent with what I have said in my former letter, for you charge me in your last with strange inconsistency which you cannot reconcile, "because I stated that in consequence of your not testing by experiment a mode of marking, which we had devised together, I had carried into effect another mode entirely original with me." The only inconsistency is in your own misapprehension of my letter. You apply my re-

mark without any warrant to the whole invention, whereas, my letter limits it expressly to a small part, to that only which relates to the chemical experiment we proposed to try together, to a mode of marking.

From a review of the whole matter, it is very evident to me that you have been led to project, since your arrival home, a telegraph of your own, founded on the intercourse with me on board the ship, and the free imparting of my invention at that time to you. I will not complain, although under the circumstances I might complain, of your intrusion upon my ground. But you will have to use great circumspection. By this intrusion you have produced a most delicate position of matters. For by persisting in your unfounded claim, you will not only deprive me of my rights, but you necessarily imply a charge against me of depriving you of your right. On this point, sir, you must perceive, the necessity of treading very cautiously. You will, I hope, publish nothing which shall implicate me in the slightest degree. A public vindication I should wish to avoid not less on your account and the general account of science than my own, and I shall avoid it unless you compel me to it by the course you adopt in announcing your own invention. My invention—the invention on board the Sully—has for some time been entered at the Patent Office. I have made contracts and formed partnerships in virtue of the rights secured by me; any infringements of those rights will oblige me to take a course which, were I unconnected with others, I might not pursue. For such is my aversion to a difference with any man, especially a man of science like yourself, that I would, personally, rather suffer the wrong, than by vindicating my rights, give any occasion for reflection upon the character or disposition of those whose time and talents ought to be employed in enlarging the bounds of science, and not in settling the merits of mere personal claims.

Whatever, therefore, I might personally wish, I am so associated with others that justice will demand a prompt vindication of my own rights if they are attacked. I have chosen to ascribe your motives, in asserting so unfounded a claim to my labors, to honest forgetfulness of the circumstances as they occurred on board the Sully, and to a misconception of the nature of my invention. And I trust that no measures on your part will compel me to adopt any other less favorable explanation of your conduct. I therefore yet hope that this matter can be settled in private, (I have written plainly for this very end,) and I also hope, if you are determined to present another Electro-Magnetic Telegraph to the world, you will do it without clashing with my prior claim. Hoping to have such an answer as shall clear up rather than increase difficulties,

I am, as ever, in respect for your genius and acquirements,

Your most obedient servant,

SAMUEL F. B. MORSE.

(G.)

Dr. Jackson's Article in the Boston Post.

"ELECTRO-MAGNETIC TELEGRAPH.—We are informed that the invention of the Electro-Magnetic Telegraph, which has been claimed by Mr. S. F. B. Morse, of New York, is entirely due to our fellow-citizen, Dr. Charles T. Jackson, who first conceived the idea of such an instrument during his return voyage from Europe in the packet ship Sully, in October, 1832.

"Mr. Morse being his fellow-passenger, and having pretended to feel a great interest in the invention, and a desire to participate in the experimental trials of the machinery, Dr. Jackson freely communicated to him and to all the cabin passengers his various plans for effecting the telegraphic communications.

"Subsequently, Mr. Morse undertook to monopolize the credit of the invention, when Dr. J. wrote him a friendly remonstrance, to which a long sophistical reply of a very unsatisfactory character. This was followed by a severe reprimand from Dr. J. with a detail of all the circumstances of the invention, and of the conversation which took place on board the Sully, when an impudent answer was returned, giving Dr. J. to understand that Mr. Morse had taken out a patent for the invention, and was the only inventor known to the laws, and cautioning him as to his proceedings. In the mean time Mr. Morse was informed, that if he pretended to publish an account of the instrument in the American Journal of Science, as he had attempted, that a disclaimer would follow it, whereupon he withdrew his article. The origin of the idea of the new Telegraph, as above stated, can be proved by a number of the passengers on board the Sully at the time, and Mr. Rives, the American ambassador to France, Mr. Fisher, of Philadelphia, and Capt. Pell, of the Sully, having listened to the conversation, will recollect that Mr. Morse acknowledged himself wholly unacquainted with electro-magnetism, and that Dr. J. freely informed him of every particular discovery applicable to the case."

(H.)

S. E. Morse to Dr. Jackson.

"NEW YORK, January 8, 1839.

"DR. CHARLES T. JACKSON :

"Dear Sir: My attention has been called to an article published a few days since in the Boston Post, in which you are represented as claiming the invention of the Telegraph, for which my brother (Mr. S. F. B. Morse) has obtained a patent. My brother, you may perhaps know, is in Europe, and as it may still be several months before he returns, it naturally devolves on me, in his absence, to protect his reputation and interest when assailed as they have been in the paper to which I refer. The article in the Post appears to be editorial, (I have seen it only as copied in the pa-

pers in this city,) although the statements are of such a nature that every reader regards them as made by your authority. If you are willing to assume the responsibility of the article, I ask you to give it the sanction of your name. If there is any part of the article calculated to affect my brother unfavorably, for which you are not willing to be responsible, I ask you to disclaim it. If you assume the responsibility of the article I will thank you to specify the part or parts which you claim as your invention.

"I must trust to your sense of justice to give me a prompt answer to this letter, and subscribe myself

"Your obedient servant,

"SIDNEY E. MORSE, 142 Nassau st."

(1.)

Dr. Jackson's Reply.

"BOSTON, January 23, 1839.

"SIDNEY E. MORSE:

"Sir: I have the honor of acknowledging the receipt of your favor of the 18th inst., to which I now reply.

"Thinking it due to the public, and to my own scientific reputation, that an erroneous account of the origin of the discovery and invention of an Electro-Magnetic Telegraph, which was conceived on board the Sully, October, 1832, should be corrected, I furnished some data to the editor of the Post, which he was pleased to put in his editorial department.

"Having no unfriendly feelings towards your brother, and wishing to correct some wrong opinions which I thought he entertained with regard to his share of the discovery, I wrote a letter, in which all our conversation which took place on board ship was recapitulated, so that he is in full possession of the facts on which my claim is founded.

"I had never any intention of confining the right of using the instrument to myself, for I do not think it evinces a liberal scientific spirit, and hence have never availed myself of the patent law. I am therefore disinterested, so far as concerns any pecuniary emolument to be derived from the machine. I supposed, by the movement made in New York, that your brother had returned, and I wished to remind him that he had neglected to give me the justice I deserved. I stated that an Electric Telegraph could be easily made, furnished him with all the necessary data for making an Electro-Magnetic Telegraph; and I had seen or tried every experiment to which I referred, while Mr. Morse, I doubt not, will acknowledge that those principles were then entirely new to him. I also described certain electro magnets, one of which I had packed in baggage on board ship, and which I thought could be used for the above purpose. The idea of using electricity for telegraphic purposes is somewhat ancient, for in

Ampere, (*Exposé des Nouvelles Découvertes sur L'électricité et la Magnétisme*, published in Paris, 1822,) it is mentioned, in page 71, that Soemering proposed to act by this, however, on magnetic needles marked by letters of the alphabet. He also proposed to observe the decomposition of water in separate vessels, communication in both cases being effected by wires. What I claim as my peculiar discovery is the application of a galvanic current to the effecting of permanent marking upon paper, either by producing certain chemical changes on substances laid upon it, or by the use of electro-magnets to print distinct characters, which may be done at indefinite distances by means of wire communications. I also proposed several other methods in addition, which it will be unnecessary for me to enumerate again, as they are included in my letter to your brother with the above. If I understand your brother correctly, he includes the above principles in his specifications, and if such is the fact he should have given me the credit which is my due. If you will send me a copy of his specifications, and I find therein any essential principles which I did not propose, or any parts which I did not describe to him, I will cheerfully acknowledge the same in a public manner, provided he makes acknowledgments in a like manner satisfactory to me.

"Your obedient servant, "CHARLES T. JACKSON."

(Post marked Boston, January 25; directed Sidney E. Morse, Esq., 142 Nassau street, New York.)

(K.)

Prof. Morse's Reply to Dr. Jackson's Article.—From the Boston Morning Post.

"THE ELECTRO-MAGNETIC TELEGRAPH.

"MR. EDITOR: In the month of January last, during my absence in Europe, an article appeared in your journal, and was thence copied into other papers, claiming for Dr. Charles T. Jackson, of Boston, the invention of an Electro-Magnetic Telegraph. Dr. Jackson, in a letter to my brother, acknowledges himself the author of that article, and has thus made himself responsible for its calumnious statements. He states that he invented the Telegraph on board the packet ship Sully, on her voyage from Havre to New York, in the autumn of 1837, and for the truth of his assertions he appeals to Capt. Peel, of the Sully, and to our fellow-passengers, the Hon. Mr. Rives, of Virginia, and Mr. Fisher, of Philadelphia. These gentlemen have heard of this claim of Dr. Jackson with astonishment. I have a letter from each of them, asserting unequivocally my exclusive claims to the invention, and one of them, at least, has expressed not only surprise but indignation at the reference made to him by Dr. Jackson; for, as he observes, it was notorious that the Telegraph was the subject of conversation at almost every meal during the latter

part of the voyage; that I was spoken to, and spoken of, as the inventor, and that, too, constantly, and in presence of Dr. Jackson, who put forth at that time no claim to any participation whatever in the invention. Dr. Jackson, in his article in the Post, seems desirous of leaving the impression that he must have been the inventor of the Telegraph, because he was so much better acquainted than myself with chemistry and electro-magnetism. I have no disposition to deny Dr. Jackson's superior knowledge in these branches of science, but every one acquainted with my machine knows very well that it did not require any profound knowledge of these sciences to invent it. I needed only to know such facts as are contained in the elementary treatises on these sciences. It is true that these facts were recalled to my memory in conversation with Dr. Jackson, as also with others of my fellow-passengers. In a particular instance, I inquired of Dr. Jackson if there were not some substances which would be so easily decomposed by the electric fluid that simple contact with a wire in an electric state would show a mark. I wished to use it to mark the signs I had planned to convey intelligence. He suggested, that if tumeric paper, dipped in a solution of sulphate of soda, were brought in contact with my wire when in an electric state, the salt might be decomposed, and leave a brown mark on the paper. I was pleased with the suggestion, and proposed that on our arrival we should try the experiment together. Accordingly, on every visit to Boston for several years afterwards, I called on Dr. Jackson and proposed trying the experiment, but he always made his numerous and pressing engagements a reason for postponing it, and whether he has tried the experiment to this day I know not.

"It is sufficient for me to say that it is not the mode of marking which I use in my machine, and I am at a loss, therefore, to conceive on what ground Dr. Jackson can claim to be a participator in my invention; for certainly he did not suggest and one of its mechanical movements, and every one acquainted with my Telegraph knows that its merit is entirely mechanical.

"If further evidence were needed of the absurdity of Dr. Jackson's claim to my invention, it may be found in the correspondence he had with me on the subject in 1837, in which he pronounces the essential parts of my invention, which are now in successful operation "impracticable," and proposes a mode of his own, not only bearing no resemblance to mine, but so awkward and complicated as to convince every one who has read his letter that he could not have been the inventor of my Telegraph.

"With respect, your obedient servant

SAMUEL F. B. MORSE,

"Editors who have copied Dr. Jackson's article are requested to publish this reply.

"NEW YORK CITY UNIVERSITY, *May, 14, 1849.*"

GAYLORD BROS. Inc.
Syracuse, N. Y.
Stockton, Calif.

Accession no.

JFF

Author

Kendall, Amos

Morse's patent.

Call no.

MECHANICAL

